

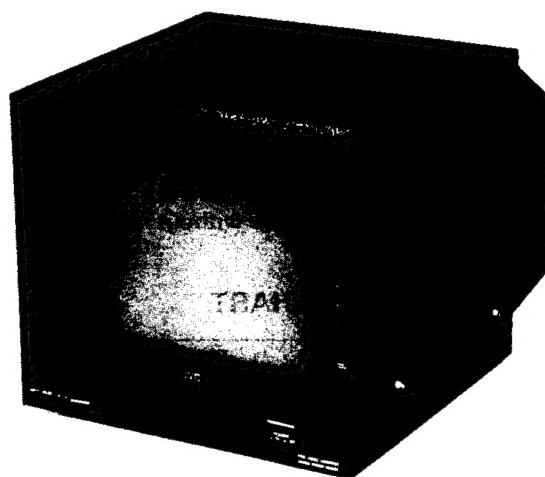
# JVC

## SERVICE MANUAL

MODEL

### TM-90PSN

10" COLOR VIDEO MONITOR



No. 5418  
Apr. 1983

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# SPECIFICATIONS

Dimensions : 23.1 cm (9 1/8")H x 25.4 cm (10")W x 34.8 cm (13 7/8")D  
(Height Size was measured with handle and stand folded.)

Weight : 9.6 kg (21.1 lbs)

Color System	.....	PAL/SECAM/NTSC (3.58 MHz, 4.43 MHz)
Scanning	.....	525 Lines, 60 Hz(NTSC) 625 Lines, 50 Hz(PAL/SECAM)
Horizontal resolution	.....	270 Lines(NTSC), 300 Lines(PAL/SECAM)
Video/Audio INPUT/OUTPUT		
INPUT 1.	Video input	..... 1.0 Vp-p, 75 $\Omega$ , BNC Connector
	Video output	..... 1.0 Vp-p, 75 $\Omega$ , BNC Connector (Bridge out, Switched out)
	Audio input	..... 390 mV rms (-6 dBs), Hi. impedance, RCA Jack
	Audio output	..... 390 mV rms (-6 dBs), Low impedance, RCA Jack (Bridge out, Switched out)
INPUT 2.	Video	..... 1.0 Vp-p, 75 $\Omega$ , BNC Connector, EIAJ 8-pin Connector (Both terminals are bridge-connected)
	Audio	..... 390 mV rms (-6 dBs), Hi. impedance, RCA Jack, EIAJ 8-pin Connector (Both terminals are bridge-connected)

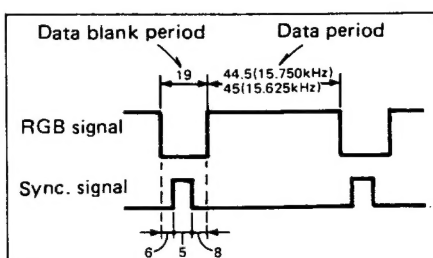
## RGB Input terminals

RGB signal	TTL Level Positive polarity	[ Negativ polarity is also possible by changing the "SYNC INV" switch setting. ]
H. Sync. signal	TTL Level Positive polarity	
V. Sync. signal	TTL Level Positive polarity	
Number of characters displayed	1,000 characters (40 columns x 25 lines, 5 x 7 dots matrix)	
Scan frequency	H. 15.75 kHz/15.625 kHz V. 60 Hz/50 Hz	
Power input	110V/120V/220V/240V AC, 50/60 Hz	
Power consumption	45 W(max.), 37 W(avg.), 1 W(when the set is off)	
Picture tube	10", 76° precision in-line, Vertical stripe black matrix, Quick start.	
Viewable picture size	13.6 cm(H) x 17.3 cm(W)	
High voltage	21 kV ± 1 kV (at zero beam current)	
Speaker	8 cm round type, 32 Ω	
Audio power output	1 W	
Tube	1	
IC	8	
Transistor	72	
(Design and specifications subject to change without notice.)		

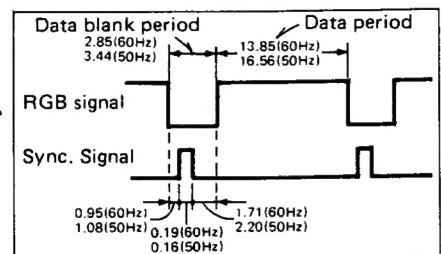
(Design and specifications subject to change without notice.)

## RGB INPUT SIGNAL TIMING CHART

Horizontal period  
( $\mu$ S)



Vertical period  
(mS)



# 1. SAFETY PRECAUTIONS

1. The design of this product contains special hardware, many circuits and components especially for safety purposes.  
For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of receiver should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in television sets have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service Manual. **Electrical components having such features are identified by shading on the schematics and by (  $\Delta$  ) on the parts list in Service Manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list in Service Manual may create shock, fire, or other hazards.
4. If any repair has been made to the chassis, it is recommended that the  $B_1$  setting be checked or adjusted (See ADJUSTMENT OF  $B_1$  VOLTAGE).
5. The high voltage applied to the picture tube must conform with that specified in Service Manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high-voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high-voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
6. Do not check high-voltage by drawing an arc. Use a high-voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10k $\Omega$  2W resistor to the anode button.

## LINE VOLTAGE SELECTOR (AC VOLT SELECT)

Before connecting the mains lead to the house current receptacle, be sure to set the line voltage selector to the position corresponding to your local voltage (240V, 220V, 120V, 110V).

7. When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high-voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.

## 8. ISOLATION CHECK

### (SAFETY AGAINST ELECTRICAL SHOCK HAZARD)

After reassembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, channel selector knobs, metal cabinet, screwheads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

#### (1) DIELECTRIC STRENGTH TEST

The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis, should withstand a voltage of 3,000V AC (r.m.s.) for a period of one second.

This test method requires test equipment not generally found in the service trade.

#### (2) LEAKAGE CURRENT CHECK

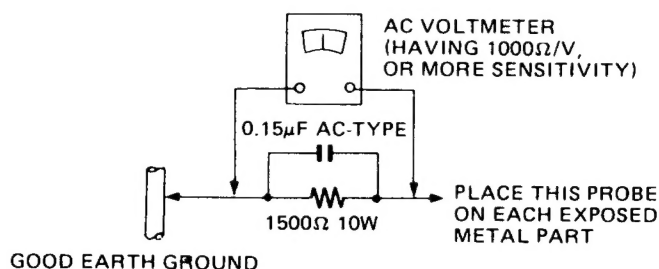
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.) Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe etc.). Any leakage current must not exceed 0.5mA.

#### • ALTERNATE CHECK METHOD

Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1500 $\Omega$  10W resistor paralleled by a 0.15 $\mu$ F AC-type capacitor between an exposed metal part and a known good earth ground (water pipe etc.).

Measure the AC voltage across the resistor with the AC voltmeter.

Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.35V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).



## 2. SERVICE ADJUSTMENTS

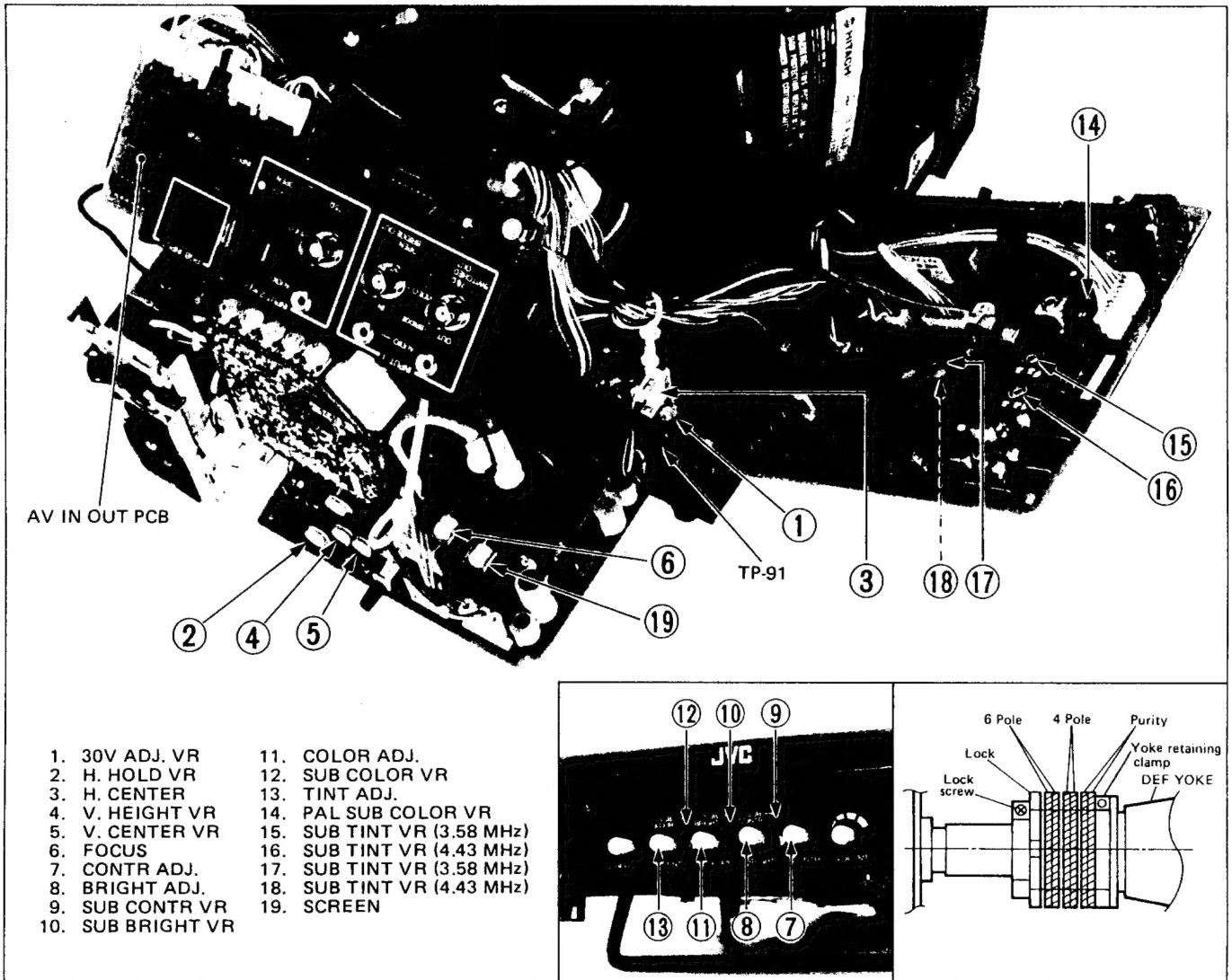


Fig. 2-1

### PURITY

Loosen the yoke retaining clamp. PAINT is used to lock the tabs of the purity/convergence magnet assembly in place. The paint must be removed with the end of a screwdriver, and then unfasten the magnet locking ring counterclockwise (Fig. 2-1) before any adjustments are attempted.

1. Display a monochrome pattern.
2. Let the PURITY MAGNET TABS come in line horizontally. A long tab should be in the same direction as the other short tab. (Fig. 2-2).
3. Move the yoke slowly backward.
4. Turn the GREEN CUT-OFF VR maximum and the RED and BLUE CUT-OFF VR's to minimum. Then adjust the SCREEN VR so that the green band can be seen best. (Fig. 2-1, 2-7)
5. Rotate the PURITY MAGNET TABS in the opposite directions and with them kept at an angle, together in either direction so that the green band is centered on the picture tube. (Fig. 2-3)

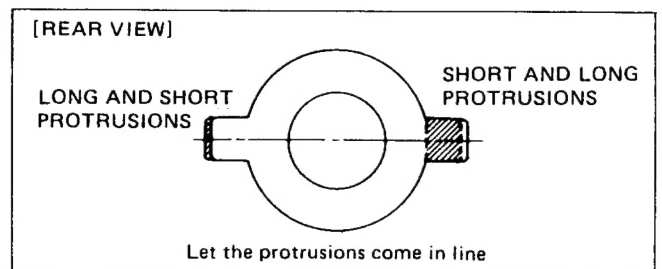


Fig. 2-2

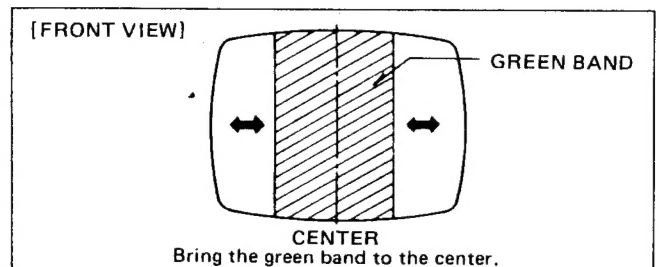


Fig. 2-3



6. Check the vertical center position by displaying a horizontal line. Unless correct, bring it to the center by rotating the two tabs, kept at an angle, together in either direction. (Fig. 2-4, 2-7)
7. Repeat steps 5 and 6 alternately until the green band and the vertical center come to the center.
8. Move the yoke slowly towards the bell of the tube so that the whole surface of the picture tube is filled with a green pure raster.
9. Turning RED or BLUE CUT-OFF VR to maximum and GREEN CUT-OFF VR to minimum, make sure of a red or blue pure raster.
10. Secure the yoke retaining clamp.

### STATIC CONVERGENCE

1. Display a crosshatch pattern and adjust BRIGHTNESS and CONTRAST control for a distinct pattern.
2. Rotate the front pair of tabs (4 POLE CONVERGENCE MAGNETS) as a unit to minimize separation of the red and blue lines around the center of the screen.
3. To adjust the convergence of red and blue, vary the angle between the tabs. (Fig. 2-5)
4. Rotate the rear pair of tabs (6 POLE CONVERGENCE MAGNETS) as a unit to minimize separation of the magenta (R/B) and green lines. (Fig. 2-6)
5. Adjust the spacing of the rear tabs to converge the magenta and green lines.
6. Apply paint to fix 6 magnets.
7. Fasten the magnet locking ring clockwise.

### WHITE BALANCE

1. Display a monochrome pattern.
2. Set the RED and GREEN DRIVE VR's for their mechanical center (Fig. 2-7)
3. Turn the RED, GREEN and BLUE CUT-OFF VR's and the SCREEN VR fully counterclockwise. (Fig. 2-1, 2-7)
4. By referring to Fig. 2-7, set a horizontal line on the screen.
5. Turn SCREEN VR slowly clockwise until a very faint horizontal line appears.
6. First, turn clockwise by about  $10^\circ$  the CUT-OFF VR of the color which has appeared and then adjust the SCREEN VR again so that the color may shine faintly.
7. Turn the other color CUT-OFF VR's slowly clockwise until a reasonable white line appears.
8. By referring to Fig. 2-7, turn the horizontal line screen to normal screen status.
9. Adjust the RED and GREEN DRIVE VR's for best white highlights.

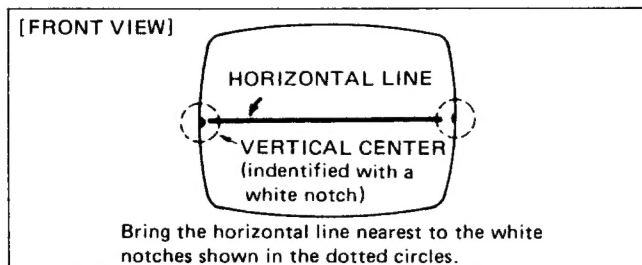


Fig. 2-4

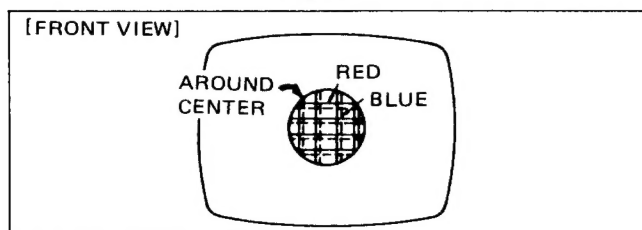


Fig. 2-5

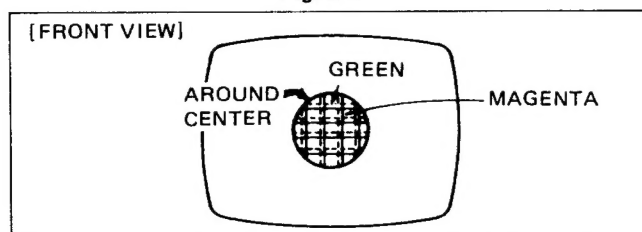
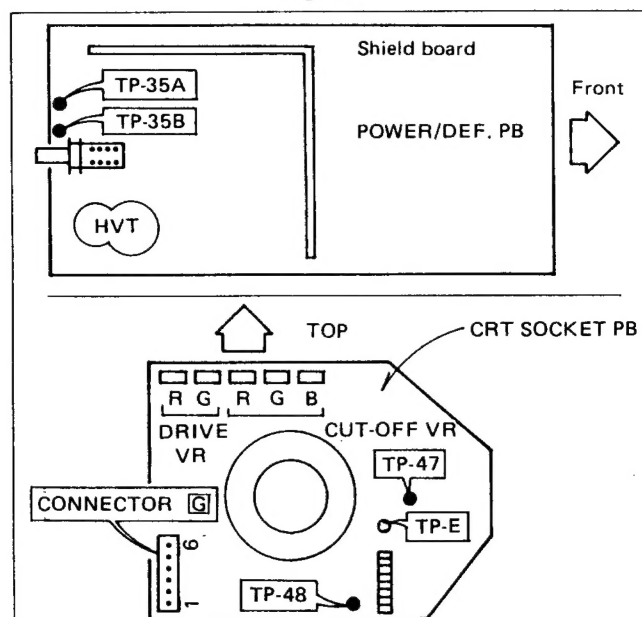


Fig. 2-6



#### Horizontal line display method

1. First, cause shorting between TP-48 and TP-E with a jumper wire.
2. Next, cause shorting on "1", "3", and "6" of CONNECTOR G.
3. Finally, cause shorting between TP-35A and TP-35B. These three steps will cause a horizontal line to appear on the screen.
4. When returning to the original status, disconnect the jumper wires in the sequence of Steps 3 → 2 → 1 above.

Fig. 2-7

**B<sub>1</sub> VOLTAGE (30V ADJ.)**

1. Cut off the picture by the BRIGHT VR and SUB BRIGHT VR.
2. Adjust the 30V ADJ. VR (R916) to obtain DC 30V between TP-91 and the ground.

**HORIZONTAL OSCILLATOR**

1. Set the H. HOLD VR (R506) to the mechanical center position.
2. Connect a jumper wire between TP-33 and ground.
3. Adjust H. HOLD VR (R506) until the picture is in view and locks or drift slowly back and forth.
4. Remove a jumper wire.
5. Confirm that the set maintains horizontal sync. when signals are changed.

**H. CENTER**

Centering is completed at the factory, although it may become distorted when the CRT is changed.

In such case, moving the CONNECTOR **U** (adj. point left, center and right) moves the picture left or right.

**V. HEIGHT AND V. CENTER**

1. Set the DISK SW to the AUTO side.
2. Display a picture that facilitates confirming vertical symmetry under 60 Hz (NTSC) vertical frequency.
3. Adjust the V. HEIGHT VR (R420) to obtain the optimum size of vertical oscillation width.
4. Adjust the V. CENTER VR (R429) to cause the picture to appear in the screen center.
5. Display a picture which facilitates confirming vertical symmetry under 50 Hz (PAL/SECAM) vertical frequency.
6. Adjust the 50 Hz V. HEIGHT VR (R122) to obtain the optimum size of vertical oscillation width.

**FOCUS**

Adjust FOCUS control for best overall definition and picture detail at normal brightness and contrast.

**RGB SYNC INVERTOR**

By changing the setting of the SYNC SWITCH in the AV IN OUT PCB interior, the polarity of RGB sync signals can be reversed.

**SUB CONTRAST AND SUB BRIGHTNESS**

Display a picture, set the CONTRAST and BRIGHT knobs on the control panel to the central position respectively (where they click). Then align both the SUB CONT (R276) and SUB BRIGHT (R279) VR's until an ideal picture is obtained.

**SUB COLOR (PAL, SECAM)**

1. Display a SECAM color signal, and set the COLOR knob on the control panel to the central position.
2. Adjust the SUB COLOR VR (R324) until natural color density is obtained.
3. Next, display the PAL color signals.
4. Adjust the PAL SUB COLOR VR (R316) until similar natural color density is obtained.

**NTSC COLOR CIRCUIT****SUB TINT AND SUB COLOR**

**Note:** Adjustment of the SUB COLOR VR (PAL, SECAM) must be completed.

1. Display a color signal (4.43 MHz/3.58 MHz).
2. Set the TINT and COLOR knobs in the control panel interior at central positions.
3. Adjust the SUB TINT VR (R828/R827) and the SUB COLOR VR (R811/R813) until natural color is obtained.

**COLOR SYNCHRONIZATION**

1. Display a color bar signal (4.43/3.58 MHz).
2. Connect a jumper wire between TP-43 and TP-E.
3. Connect a jumper wire between TP-42 and pin 12 of IC801.
4. Use a nonmetallic driver to turn the TRIMMER CAPACITOR (C816/C815). Adjust so that the rolling color stripes become thick and the rolling slows or stops.
5. Disconnect the two jumper wires.
6. Confirm that color sync is not disrupted when signals are switched.

## ALIGNMENTS LOCATION

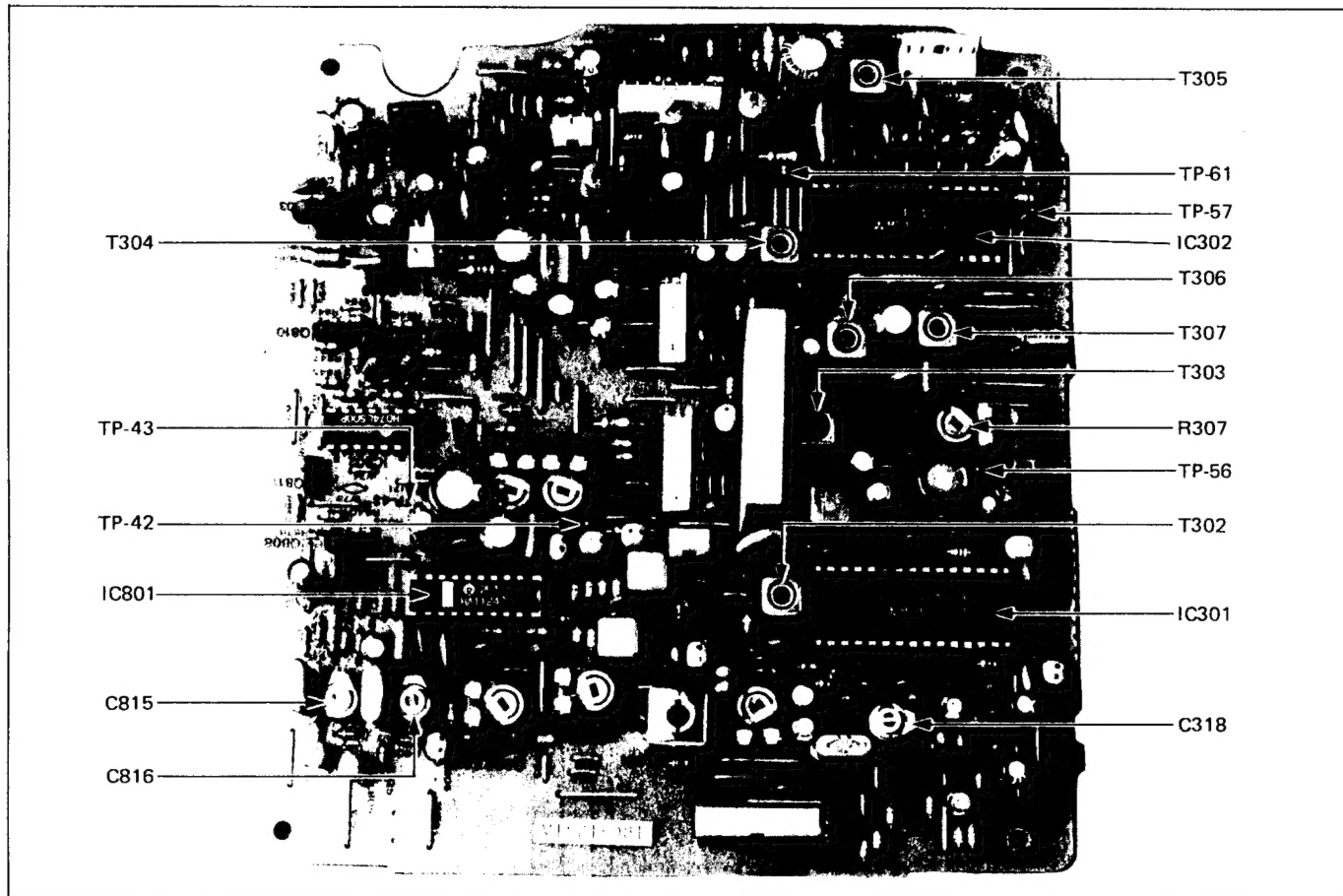


Fig. 2-8

## PAL COLOR CIRCUIT (Fig. 2-8)

1. Display a PAL color bar signal.
2. Set the oscilloscope at the X-Y mode and connect Channel 1 (X axis) to TP-56 and Channel 2 (Y axis) to TP-57 respectively.
3. Short pin 4 (TP-53A) and pin 5 (TP-53B) of IC301 with a jump wire.
4. Supply bias to pin 26 (TP-52) of IC301 through 10 k $\Omega$  resistor from 12 V DC.
5. Adjust T302 (CW TRANSF) for the minimum figure.
6. Adjust R307 (DL AMP) so that the figure becomes (B) from (A). (Shown in Fig. 2-9)
7. Adjust T303 (DL P. TRANSF) so that the figure becomes (C) from (B).
8. Adjust C318 (OSC ADJ) so that the rolling color stripes become thick and the rolling slows or stops.

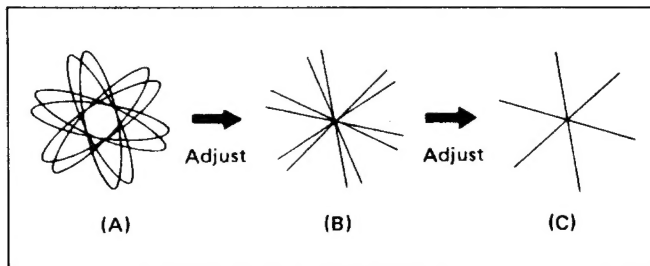


Fig. 2-9

## SECAM COLOR CIRCUIT (Fig. 2-8)

**Note :** PAL color adjustment must be completed.

1. Display a SECAM color bar signal.
2. Connect an oscilloscope to pin 27 (TP-61) of IC302.
3. Adjust T304 (BEL TRANSF) for the flat waveform as shown in Fig. 3-10 (B).
4. Connect a digital voltmeter to pin 26 of IC302.
5. Adjust T305 (IDENT TRANSF) for the maximum DC voltage.
6. Adjust T306 (DISCRI. TRANSF) and T307 (DISCRI. TRANSF) until colors are eliminated from the black-and-white sections of the color bars.

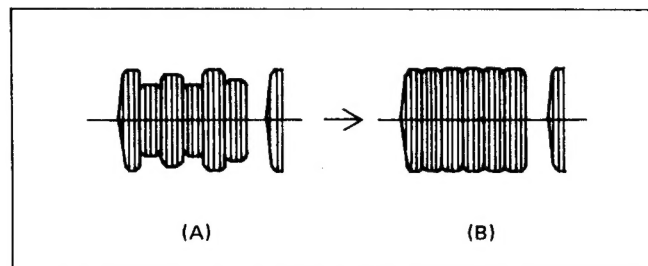
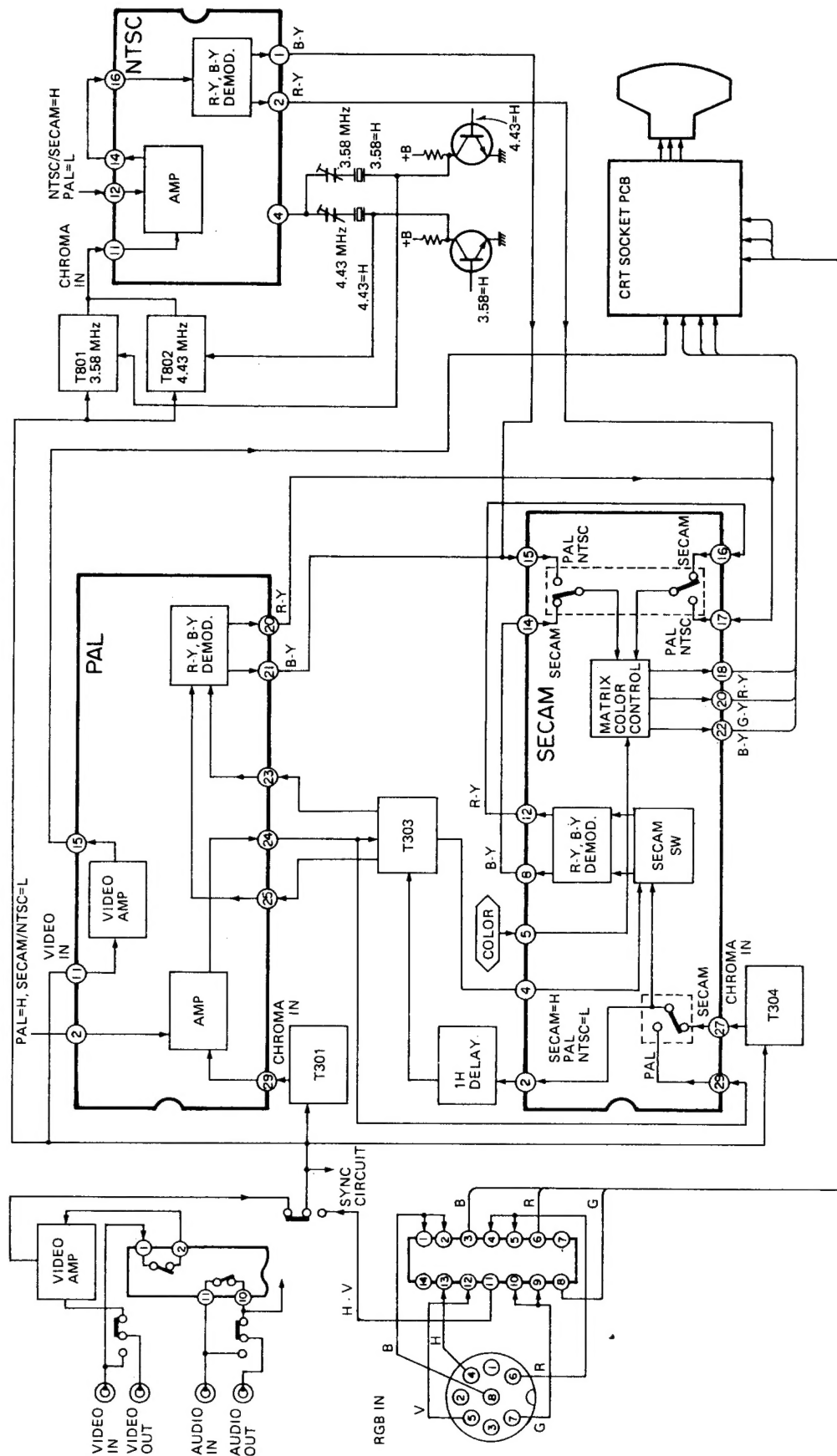


Fig. 2-10

### 3. BLOCK DIAGRAM

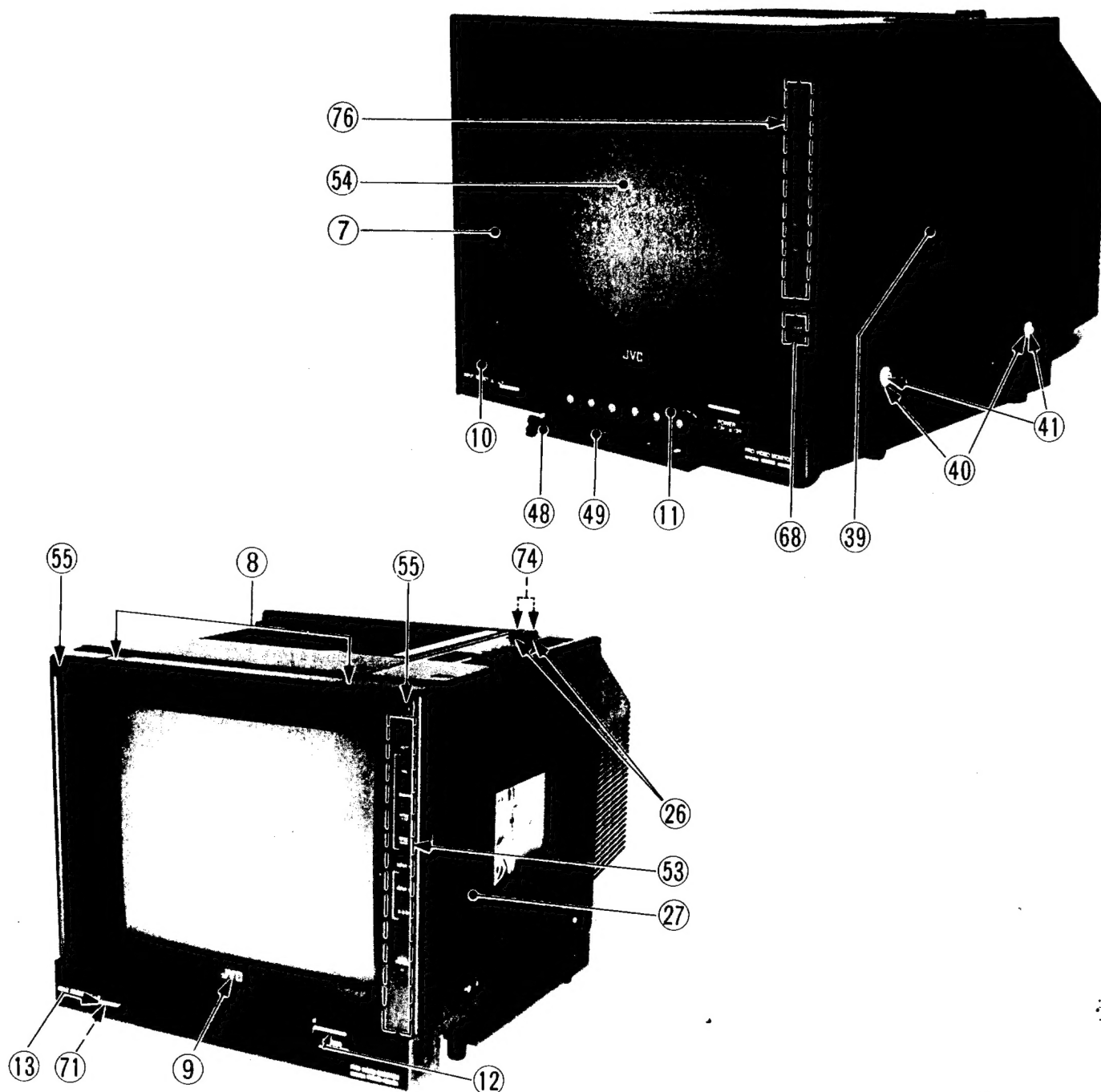


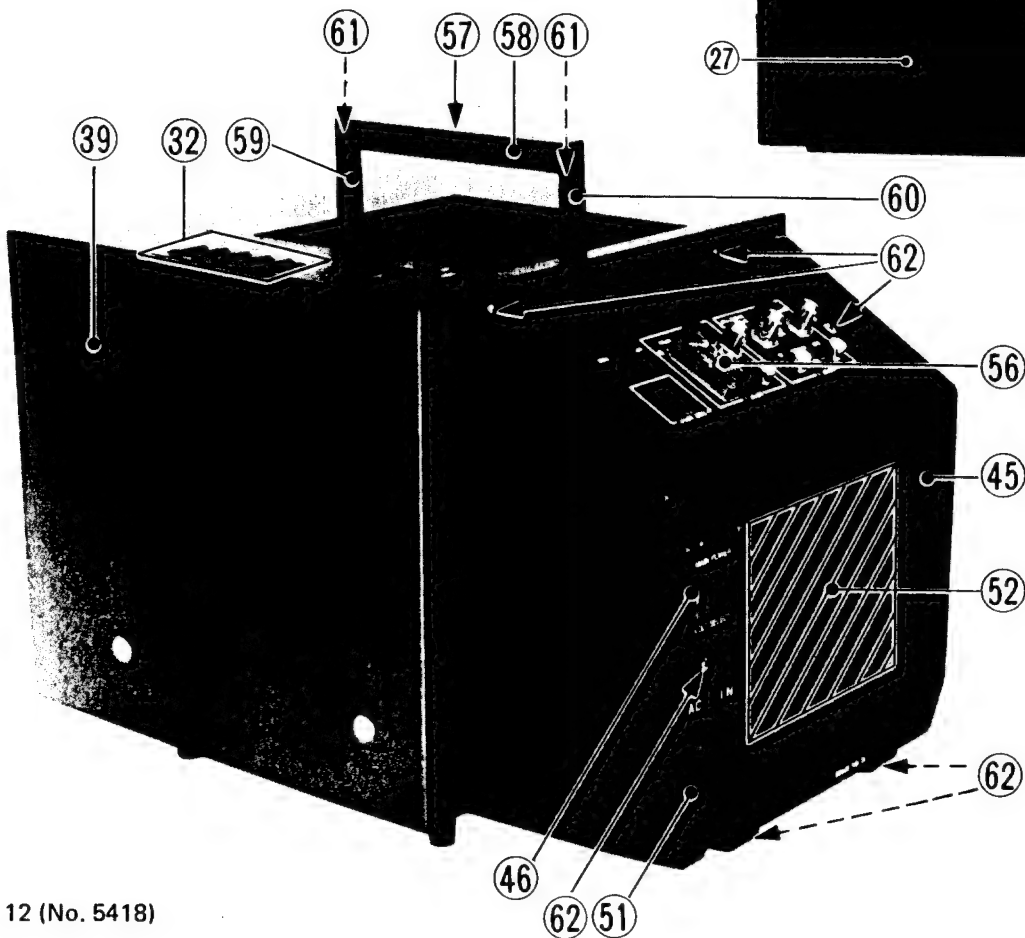
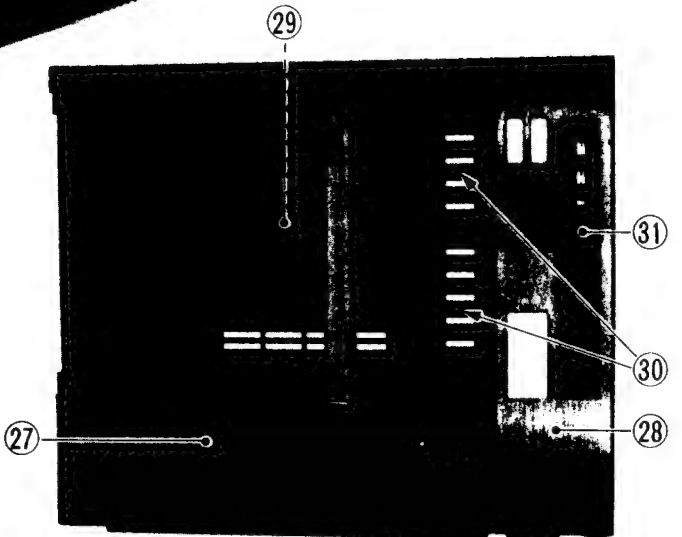
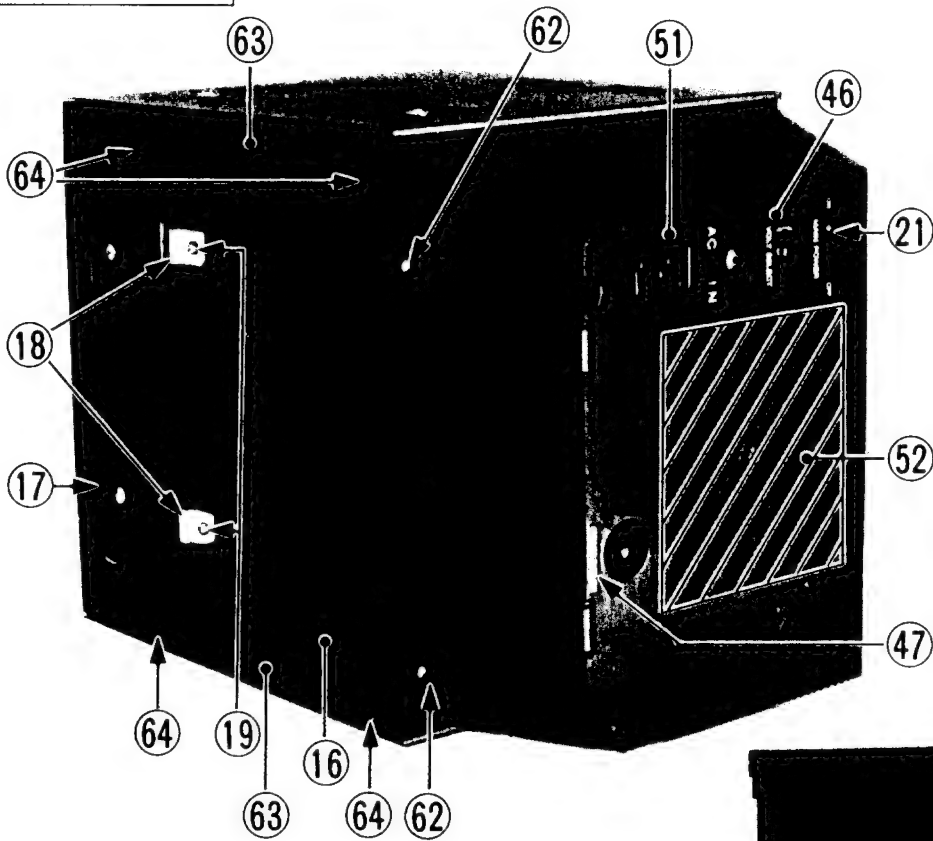
## CHASSIS AND CABINET PARTS LIST

VIEW NO.	SYMBOL NO.	△	PART NO.	PART NAME	REMARK
1	V01	△	250ATB22(E)	Picture Tube	
2	DY01	△	CJ26001-00A	Def. Yoke	
3			CE40266-00A	PC Magnet	
4			A46445	Focus Cover	
5			CJ49503-001	Focus Cap.	
6	T502	△	CJ26055-00A	HV Transf.	
7			CM10089-00C-MQ	Front Panel Ass'y	
8			CM40861-002	Stopper	(x2) within Front Panel Ass'y
9			C41680-1	JVC Mark	"
10			CM20222-00C	Control Panel Ass'y	
11			CM41216-003	Control Label	within Control Panel Ass'y
12			CM40830-A01	Power Knob	POWER
13			CM41102-001	Push Knob	INPUT SELECT
14			CJ39507-00C	Deg. Coil	
15			CE30057-A0B	AV Terminal Ass'y	
16			CM20255-00B	Bottom Ass'y	
17			CM30394-001	Stand	
18			CM40827-001	Stand Bracket	(x2)
19			SBSB3010R	Tap Screw	(x2) for Stand
20	T901	△	CE30077-A0A	Power Transf.	
21	S902	△	QSE2135-002	Seesaw SW	MAIN POWER
22	S903	△	CEX40285-001	Voltage Selector	
23			A38548-A	Fuse Holder	
24			A38549-A	Fuse Cover	
25	J01	△	QMC0335-003R	AC Socket	
26			CM40831-001	Select Knob	(x2) SKEW, DISC
27			CM10092-00E	Top Cabinet Ass'y	
28			CM20174-A02	Control Panel	within Top Cabinet Ass'y
29			CM40916-001	Speaker Sarn	"
30			A38080-71	Stick Sheet	(x2) "
31			CM41647-001	Spacer	"
32			CM41087-001	Push Knob	(x5) AUTO, PAL, SECAM NTSC (4.43), NTSC (3.58)
33			CM40840-001	Spring	
34			A48960-3	Pin	(x2)
35			CM40835-001	Pin Holder	(x2)
36			SDSA3010Z	Tap Screw	(x2) for Pin Holder
37			EAS-8P16AK	Speaker	
38			CE40146-003	W, Q Magnet	
39			CM10145-A04	Top Case	
40			Q03093-301	Washer	(x4) for Top Case
41			GPSA4016M	Tap Screw	(x4) "
42	T903	△	CE40180-00A	Line Filter	
43	C909	△	QFZ9017-473M	MM Cap.	0.047μF
44	F901	△	QMF51A2-3R15S	Fuse	3.15A
45			CM10094-00E	Rear Cover Ass'y	
46			CM41648-001	Label	
47			CM41468-001	Label	
48			CM30628-00C	Door Ass'y	
49			CM41104-003	Label	within Door Ass'y
50	F902	△	QMF51A2-1R6S	Fuse	1.6A
51			CM40970-004	Power Label	
52			A38675-3	Rating Label	
53			CM40826-005	Channel Window	
54			CM20175-002	Front Glass	
55			CM41103-A01	Screw	(x2) for Front Glass
56	J09		GU20125-42-8	8P Connector	VTR
57			CM30398-00B	Handle Ass'y	
58			CM30400-002	Handle Grip	within Handle Ass'y
59			CM30399-003	Handle Arm	"
60			CM30399-004	"	"
61			SHSP3008MS	Screw	(x2) "
62			SHSA4016R	Tap Screw	(x6) for Rear Cover

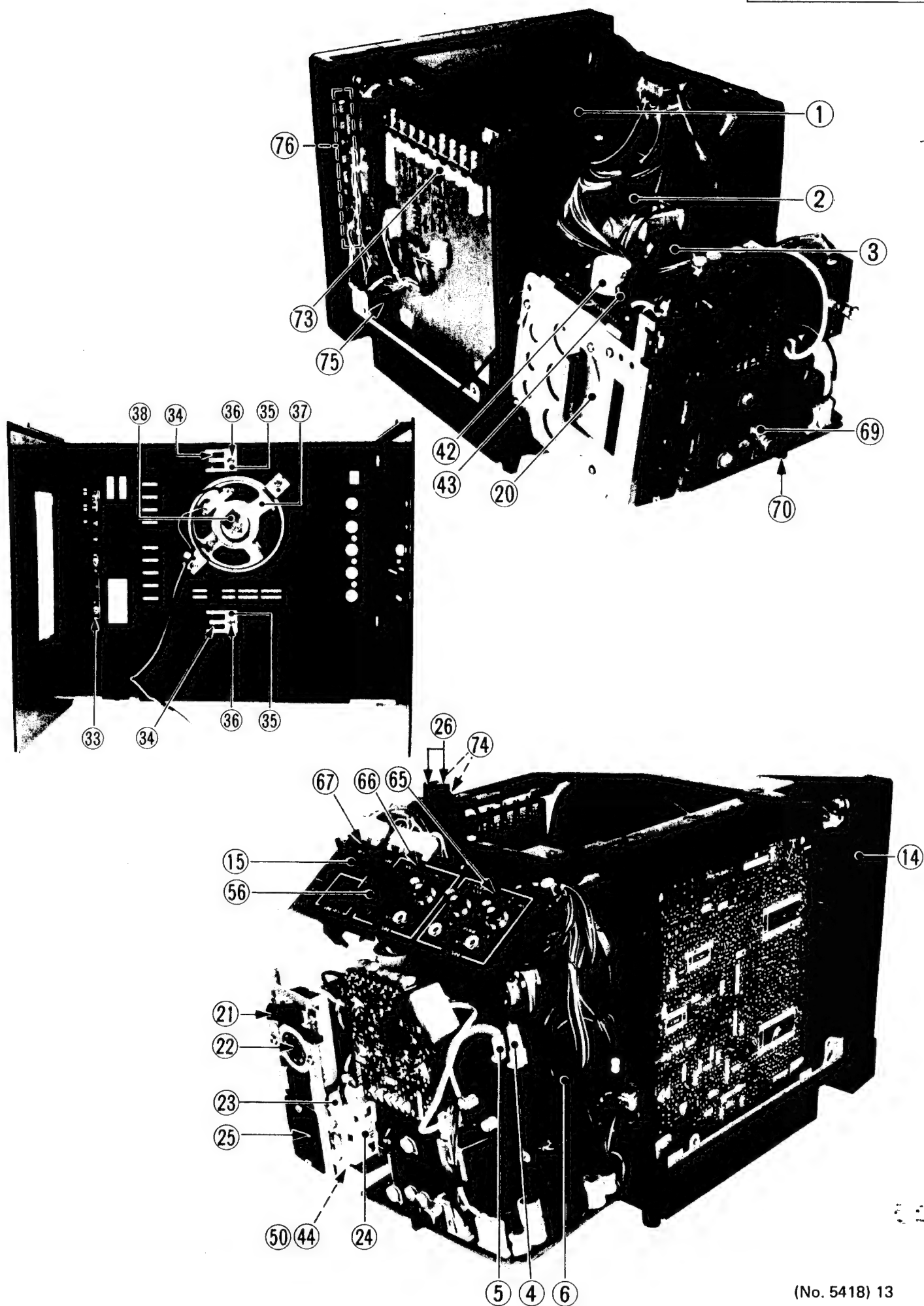
VIEW NO.	SYMBOL NO.	△	PART NO.	PART NAME	REMARK
63			CM30530-001	Spacer	(x2) within Bottom Ass'y
64			CM40673-002	Foot Felt	(x4) "
65	S201		QSS4224-004	Slide SW	75Ω SW
66	S202		AX49462	"	"
67	S203		"	"	RGB/INPUT 1,2
68			AX49463-2	Pilot Lamp	POWER
69	S2501		AX49292	Push Switch	Deg. SW.
70			C40755	Push Knob	Deg. SW. Knob
71	S204		CEX40055-002	Push Switch	Input Select
72	S205		CEX40223-004	Slide Switch	Sync. inv.
73	S7101		CEX40055-003	Push Switch	System SW.
74	S8101~02		AX49611-002	Slide Switch	Skew & Disc
75	S901		CEX40055-002	Push Switch	Power
76	D5101~08		SLR-54UT5	LED	AUTO, PAL, SECAM, NTSC (3.58, 4.43) Input 1, Input 2, RGB

## [EXPLODED VIEW]









## TRC-1241A (SIGNAL PCB ASS'Y)

SYMBOL NO.	△	PART NO.	PART NAME	REMARK	SYMBOL NO.	△	PART NO.	PART NAME	REMARK
<b>VARIABLE RESISTOR</b>					<b>TRANSFORMER</b>				
R1307		CEX40053-053	VR(DL AMP.)	5kΩ B	L1205		A49468-562	Peaking Coil	5600μH
1316		" -014	" (PAL SUB COLOR)	10kΩ "	1301		A76186-68	"	68μH
1811		" -024	" (4.43 SUB COLOR)	20kΩ "	1302		" -8.2	"	8.2μH
1813		" -024	" (3.58 SUB COLOR)	" "	1801,2		" -680	"	680μH
1827		" -014	" (3.58 SUB TINT)	10kΩ "	1803		" -180	"	180μH
1828		" -014	" (4.43 SUB TINT)	" "	1804		" -680	"	680μH
<b>CAPACITOR</b>					<b>DIODE</b>				
C1201		QEU51AM-107M	E Cap.	100μF 10V M	D1201		1SS133-Y	Si. Diode	
1206		QEU51CM-476M	E Cap.	47μF 16V "	~ 5		"	"	
1208,9		QCT25UJ-330	C Cap.	33pF	1301		"	"	
1210		" -2R0	"	2pF	1601,2		"	"	
1211		QEU51HM-474M	E Cap.	0.47μF 50V M	1603		RD22E(B1)-Y	Zener Diode	
1214,5		QEU51CM-106M	"	10μF 16V "	1801		1SS133-Y	Si. Diode	
1217		" -106M	"	" " "	~ 5		"	"	
1219		QEU41HM-225M	"	2.2μF 50V "	1806		RD5.1E(B2)	Zener Diode	
1220		QEU51HM-335M	"	3.3μF " "	<b>TRANSISTOR</b>				
1222		QEU51CM-106M	"	10μF 16V "	Q1201		2SD637(R,S)	Transistor	
1223		QCT25UJ-680	C Cap.	68pF	~ 5		"	"	
1304		QEU51HM-474M	E Cap.	0.47μF 50V M	1206,7		2SB642(Q,R)	"	
1305		QEB51HM-224M	"	0.22μF " "	1208		2SD637(R,S)	"	
1307		QCT25CH-470	C Cap.	47pF " J	1209		2SB642(Q,R)	"	
1308		" -330	"	33pF " "	1210		2SD637(R,S)	"	
1309		QEU51CM-227M	E Cap.	22μF 16V M	~12		"	"	
1312		QEK41CM-106M	"	10μF " "	1301,2		2SD637(R,S)	"	
1314		" -106M	"	" " "	1601		"	"	
1318		QAT3001-010	Trimmer Cap.	"	1602		2SD638(R,S)	"	
1321		QEN51HM-105	BP E Cap.	1μF 50V M	1603		2SD789(B)	Si. Transistor	
1325		QEU51AM-107M	E Cap.	100μF 10V "	1604		2SB740(B)	"	
1328		QEU51HM-105M	"	1μF 50V "	1605		2SD1265(P)-L	"	
1331		" -105M	"	" " "	1801		2SD637(R,S)	Transistor	
1332		QCT25UJ-820	C Cap.	82pF	~ 5		"	"	
1333		" -820	"	"	1806		2SB642(Q,R)	"	
1336		QEU41CM-106M	E Cap.	10μF 16V M	1807,8		2SB788(T)	"	
1338		QEU51CM-106M	"	" " "	1809		2SD637(R,S)	"	
1339		QCT25UJ-560	C Cap.	56pF	~ 11		"	"	
1340		" -680	"	68pF	<b>IC</b>				
1345		QEU51CM-106M	E Cap.	10μF 16V M	IC1301		M51395AP	IC	
~ 7		"	"	"	1302		M51397AP	"	
1349		QEE51VK-105B	Tan. Cap.	1μF 35V K	1801		HA11247	"	
1351		" -105B	"	" " "	1802		HD74LS00P	Digital IC	
1353		" -105B	"	" " "	<b>OTHER</b>				
1355		" -474B	"	0.47μF " "	DL1201		CE40444-001	Delay Line	
1360		QFP31HJ-102S	PP Cap.	1000pF 50V J	1301		A76350	1H Delay Line	
1601		QEU51CM-336M	E Cap.	33μF 16V M	X1301		A76090	Crystal	
1603,4		" -336M	"	" " "	1801		A75746	"	
1607		QEU51EM-106M	"	10μF 25V "	1802		A76090	"	
1608		" -476M	"	47μF " "	FR1201	△	QRZ0054-2R7M	F R	2.7Ω ¼W J
1611		" -227M	"	220μF " "	1601	△	QRH124J-220H	"	22Ω ½W "
1612		QEU51CM-107M	"	100μF 16V "					
1805		" -107M	"	" " "					
1809		QEU51HM-474M	"	0.47μF 50V "					
1812		QEU51VM-475M	"	4.7μF 35V "					
1815,6		QAT3001-010	Trimmer Cap.	"					
1822		QEU51AM-476M	E Cap.	47μF 10V M					
<b>COIL</b>									
L1201		A49468-101	Peaking Coil	100μH					
1202		" -562	"	5600μH					
1203		A76186-27	"	27μH					
1204		" -1.0	"	1μH					

## TRC-2241A (POWER/DEF. PCB ASS'Y)

SYMBOL NO.	△	PART NO.	PART NAME	REMARK	SYMBOL NO.	△	PART NO.	PART NAME	REMARK
<b>VARIABLE RESISTOR</b>					<b>TRANSFORMER</b>				
R2420		A75557-471	VR(V.HEIGHT)	470Ω B	T2501		A76568-MA	H. Drive Transf.	
2429		" -222	" (V.CENTER)	2.2kΩ "	2902		A76567-MA	P. Drive Transf.	
2506		" -472	" (H.HOLD)	4.7kΩ "	<b>DIODE</b>				
2916		" -222	" (30V ADJ.)	2.2kΩ "	D2401		V06C	Si. Diode	
<b>RESISTOR</b>					2501		V19E	"	
R2422		QRX019J-2R7S	MF R	2.7Ω 1W J	2502		V09E	"	
2508		QRV141F-8451Y	"	8.45kΩ ¼W ±1%	2503		V09-G	Diode	
2512		QRG029J-271A	OM R	270Ω 2W J	2504		V09E	Si. Diode	
2513		QRG029J-221A	"	220Ω " J	2506		RD6.8E(B2)-Y	Zener Diode	
2520		QRV141F-2202Y	MF R	22kΩ ¼W ±1%	2901		RB601	Si. Diode	
2533		ERZ-C05ZK471	Z N R	"	2903		V06C	"	
2901		QRG019J-152	OM R	1.5kΩ 1W J	2904		RD12E(B)-Y	Zener Diode	
2915		QRV141F-6801Y	MF R	6.8kΩ ¼W ±1%	2905		V06C	Si. Diode	
2917		" -2402Y	"	24kΩ " "	2909		RG-2Y	"	
2931		QRG029J-681A	OM R	680Ω 2W J	2910		ESAB82-004	"	
2950		QRG019J-181S	"	180Ω 1W "	2911		1S2473H-Y	"	
2530	△	QRD149J-1R0S	C R	1Ω ¼W "	2912		HZ7-V1	Zener Diode	
2531	△	"	"	" " "	2913		HZ12(B)L	"	
<b>CAPACITOR</b>					2914,5		1S2473H-Y	Si. Diode	
C2403		QFP32AG-103M	PP Cap.	0.01μF 100V±2%	<b>TRANSISTOR</b>				
2407		QEE51VK-684M	Tan. Cap.	0.68μF 35V K	Q2501		2SC1627A(Y)	Si. Transistor	
2409		" -225M	"	2.2μF " "	2502		2SC2749	"	
2415		QEB51HM-104M	E Cap.	0.1μF 50V M	2503		03P05M	Thyristor	
2510	△	QFP42JJ-562M	PP Cap.	5600pF 630V J	2504		2SC1685	Si. Transistor	
2511	△	" -472M	"	4700pF " "	2901		2SD1133(C,D)-L	"	
2512	△	" -562M	"	5600pF " "	2908		2SA1015(Y,GR)	Transistor	
2513	△	" -562M	"	" " "	2909		2SC1685	Si. Transistor	
2514		QE20077-106M	E Cap.	10μF 250V H	~ 11				
2515		QFH62EK-335M	MM Cap.	3.3μF " K	2912		2SA817A(Y)	"	
1516		QFK62AJ-335M	"	" 100V J	2913		2SC2750	"	
2518		QEN51HM-474	BP E Cap.	0.47μF 50V M	2914		2SC1685	"	
2521		QFP31HJ-332S	PP Cap.	3300pF " J	<b>IC</b>				
2525		QEE51CK-225M	Tan. Cap.	2.2μF 16V K	IC2401		LA7801	IC	
2526	△	QCY32HK-681M	C Cap.	680pF 500V "	2402		μPC1378H	"	
2530	△	QFP42JJ-472M	PP Cap.	4700pF 630V J	<b>OTHER</b>				
2531	△	" -562M	"	5600pF " "	S2501		AX49292	Push SW	DEG. SW
2906		QEV71VR-109M	E Cap.	10000μF 35V R	F02	△	C40755	Push Knob	DEG. SW Knob
2914		QEN51CM-106	BP E Cap.	10μF 16V M	S2902		QMF51A2-3R15S	Fuse	3.15A
2922		QEM41VM-107M	E Cap.	100μF 35V "			CE40134-001	Relay	
<b>COIL</b>									
L2501		CE30001-420	Heater Choke						
2502		CE40222-001	Linearity Coil						
2503		CE30001-300	Width Coil						
2507		CE40155-001	Core						
2901		CE40244-001	Power Choke						
2902		CE40289-001	Coil						
2903		CE40155-001	Core						

## TRC-3141B (CRT SOCKET PCB ASS'Y)

SYMBOL NO.	△	PART NO.	PART NAME	REMARK	SYMBOL NO.	△	PART NO.	PART NAME	REMARK
<b>VARIABLE RESISTOR</b>					<b>RESISTOR</b>				
R3703		A75557-103	VR(BLUE CUT OFF)	10kΩ B	R3717		QRG19J-822S	OM R	8.2kΩ 1W J
3708		" -103	" (RED CUT OFF)	" "	3719		" -822S	"	" " "
3709		" -221	" (RED DRIVE)	220Ω "	3721		" -822S	"	" " "
3713		" -103	" (GREEN CUT OFF)	10kΩ "	<b>CAPACITOR</b>				
3714		" -221	" (GREEN DRIVE)	220Ω "	C3704		QET52ER-475	E Cap.	4.7μF 250V R
					3705		QCZ9017-102M	C Cap.	1000pF 3000V P
					3706		QET52ER-105	E Cap.	1μF 250V R

## TRC-3141B (CRT SOCKET PCB ASS'Y)

SYMBOL NO.	△	PART NO.	PART NAME	REMARK	SYMBOL NO.	△	PART NO.	PART NAME	REMARK
<b>COIL</b> L3701 ~ 3		A76186-150	Peaking Coil	150μH	<b>TRANSISTOR</b> Q3701 ~ 2 3704 ~ 9 3710 3711		2SC2611 2SC454(C) 2SD637(R,S) 2SB642(R)	Si. Transistor " Transistor "	
<b>DIODE</b> D3701 3702		1S2473H RM-2C	Si. Diode "		<b>OTHER</b>	△	CE40228-00A	CRT Socket	

## TRC-5241A (AV IN OUT PCB ASS'Y)

SYMBOL NO.	△	PART NO.	PART NAME	REMARK	SYMBOL NO.	△	PART NO.	PART NAME	REMARK
<b>VARIABLE RESISTOR</b> R5276		A76193-473	VR (SUB CONTRAST)	47kΩ B	D5103 5104 5105 5106 5107 5108 5231 5232 5233 5234 ~ 40 5631 ~ 3 5230		SLR-54UT5 " " " " " RD5.1E(B2) 1S2076A-Y 1S2473H-Y RD6.2E(B2)-Y " " 1S1555-LB	LED (SECAM) " (NTSC3.58) " (NTSC4.43) " (INPUT 1) " (INPUT 2) " (RGB) Zener Diode Si. Diode " Zener Diode " " Si. Diode	
5277 5279 5280 5324 5325 5329 5423 5638		CEX40225-B53M A76193-223 CEX40225-B53M A76193-103 CEX40025-B14M " -B14M CEX40224-B24M " -A14M	" (CONTRAST) " (SUB BRIGHT) " (BRIGHT) " (SUB COLOR) " (COLOR) " (TINT) " (V.HOLD) " (VOL)	5kΩ " 22kΩ " 5kΩ " 10kΩ " " " 20kΩ " 10kΩ A	<b>TRANSISTOR</b> Q5231 5232,3 5234 5235 ~ 9 5631,2 5633		2SD661(T,U) 2SD637(R,S) 2SD661(T,U) 2SD637(R,S) 2SD661(T,U) 2SD637(R,S)	Transistor " " " " " "	
<b>CAPACITOR</b> C5231 5232 5233 5234 5235 5236 5237 5241 5242 5631 5632 5633 5634 5635,6 5637 5638 5639		QEK40JM-107M QEK51AM-336M QEK40JM-336M QEU40JM-477M QEK40JM-107M QEU41AM-477M " -227M " -108M QEK40JM-107M QEK41HM-105M QEK40JM-336M QEK41HM-105M QEU41AM-477M QEK50JM-107M QEK40JM-226M " -336M QEK50JM-336M	E Cap. " " " " " " " " " " " " " " " "	100μF 6.3V M 33μF 10V " " 6.3V " 470μF " " 100μF " " 470μF 10V " 220μF " " 1000μF " " 100μF 6.3V " 1μF 50V " 33μF 6.3V " 1μF 50V " 470μF 10V " 100μF 6.3V " 22μF " " 33μF " " " " "	<b>IC</b> IC5231 5232		TC4066BP HD74LS09P	IC "	
<b>DIODE</b> D5101 5102		SLR-54UT5 "	LED (AUTO) " (PAL)		<b>OTHER</b> J10 S5201 5202 5203 5204 5205		CEX40122-001 QSS4224-004 AX49462 " CEX40055-002 CEX40223-004 AX49463-2	Din. Jack Slide SW. " " Push SW. Slide SW. Pilot Lamp	RGB. IN 75Ω SW " " RGB/INPUT 1,2 INPUT SELECT SYNC INV. MAIN POWER

## TRC-7240A (SYSTEM SW PCB ASS'Y)

SYMBOL NO.	△	PART NO.	PART NAME	REMARK	SYMBOL NO.	△	PART NO.	PART NAME	REMARK
<b>DIODE</b> D7101,2 7104 7106 ~ 14		1S2473H-K " "	Si. Diode " "		<b>OTHER</b> S7101		CEX40055-003	Push SW.	SYSTEM SW.

**TRC-8242A (H. CENTER PCB ASS'Y)**

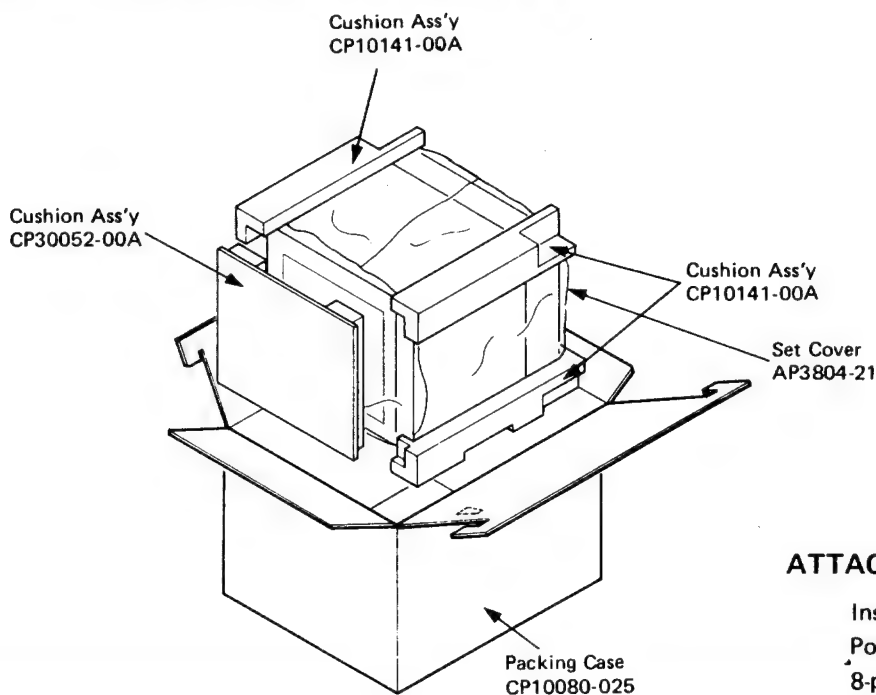
SYMBOL NO.	△	PART NO.	PART NAME	REMARK	SYMBOL NO.	△	PART NO.	PART NAME	REMARK
<b>RESISTOR</b>					<b>DIODE</b>				
R8551	△	QRZ0054-220M	F R	22Ω ¼W J	D8551		V09E	Si. Diode	
8552		QRG029J-332	OM. R	3.3kΩ 2W "	8552		"	"	
8553	△	QRZ0054-330M	F R	33Ω ¼W "					

**TRC-8241A (VERT FREQ SW PCB ASS'Y)**

SYMBOL NO.	△	PART NO.	PART NAME	REMARK	SYMBOL NO.	△	PART NO.	PART NAME	REMARK
<b>VARIABLE RESISTOR</b>					<b>TRANSISTOR</b>				
R8122		A75557-104	VR (50 Hz V.HEIGHT)	100kΩ B	Q8101		2SC1685	Si. Transistor	
					~ 8				
<b>DIODE</b>					<b>OTHER</b>				
D8101		1S2473H-K	Si. Diode		S8101		AX49611-002	Slide SW.	SKEW
8102		RD4.7E(B1)	Zener Diode		8102		" -002	"	DISC SW
8103		1S2473H-K	Si. Diode						

**TRC-9242A (POWER SW PCB ASS'Y)**

SYMBOL NO.	△	PART NO.	PART NAME	REMARK	SYMBOL NO.	△	PART NO.	PART NAME	REMARK
<b>OTHER</b>									
S901		CEX40055-002	Push SW.	POWER SW.					

**5. PACKING DIAGRAM****ATTACHED MATTERS**

Instruction book  
Power cord  
8-pin DIN plug  
Safety tips

TM-90PSN-IB-A  
△ CEX40321-200  
CEX40239-001  
BT-20021





## 7. HOW TO REMOVE FOR SERVICE

### ■ DEMOUNTING THE REAR COVER

1. Remove the six screws (A) shown in Fig. 7-1.
2. Slightly lift the rear cover and place it over the top case edge. (Fig. 7-2)
3. Press in section (1) as shown in Fig. 7-3.  
Next, remove the AV terminal from the rear cover by sliding the terminal in the arrow (3) direction while gripping and pressing in the video out terminal (2).
4. Detach the rear cover.

(When reinstalling the rear cover, follow the processes reverse to the removing procedures.)

**Note:** When reinstalling the AV terminal ass'y.

Keep the rear cover put as shown in Fig. 7-2, and then reinstall the AV terminal ass'y on section (A) shown in Fig. 7-4.

### ■ DETACHING THE TOP CASE AND THE TOP CABINET

The top case and the top cabinet can be detached by removing the four screws (B) (two screws on the opposite side) shown in Fig. 7-1.

### ■ REMOVING THE SYSTEM SW PB.

The system switch PB can be demounted by removing two screws (A) shown in Fig. 7-5.

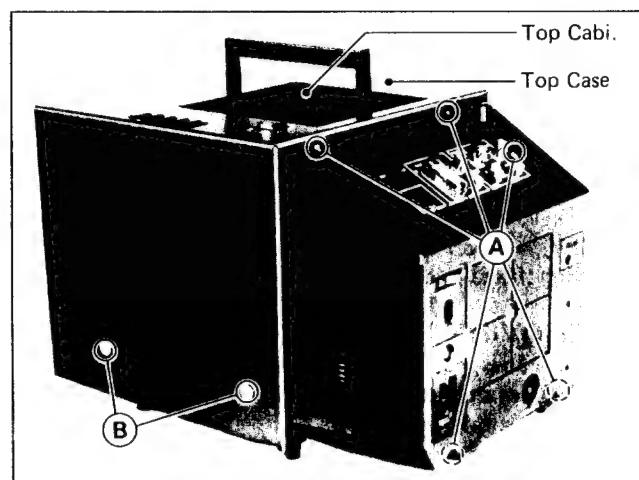


Fig. 7-1

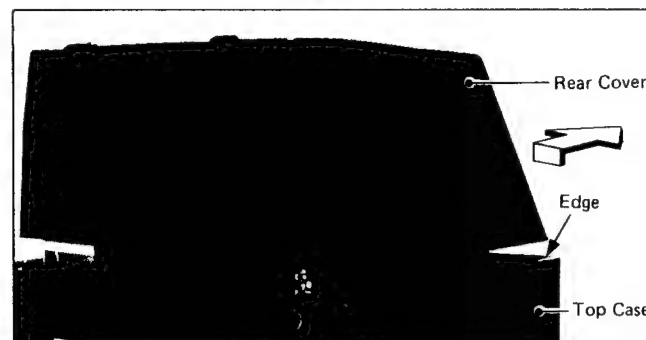


Fig. 7-2

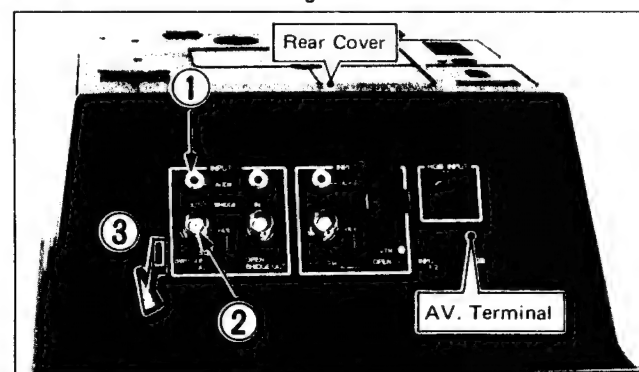


Fig. 7-3

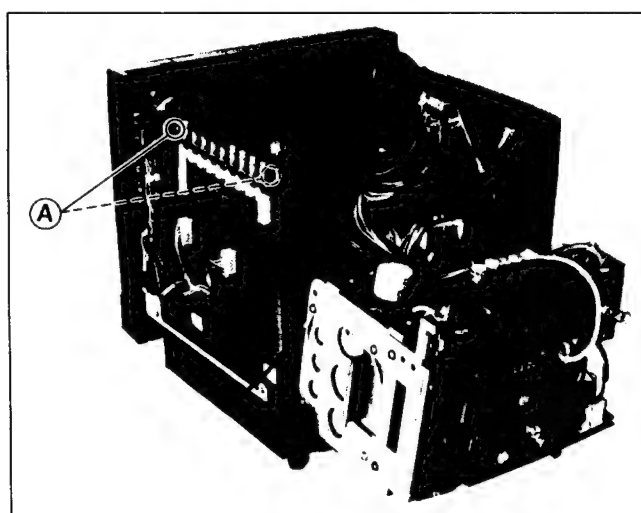


Fig. 7-5

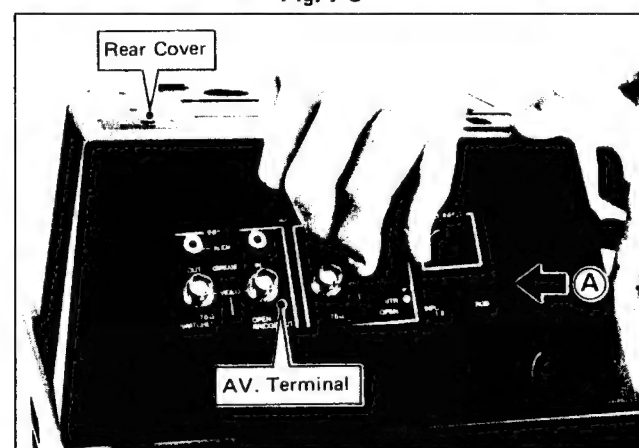


Fig. 7-4



### ■ REMOVING THE FRONT GLASS

Remove the two screws (B) shown in Fig. 7-6, then remove the Front glass from the Front panel.

### ■ REMOVING THE CONTROL PB AND THE POWER SW

While keeping the front panel demounted (Condition of Fig. 7-7), detach the control PB and the power SW by removing the two screws (A) shown in Fig. 7-7.

### ■ REMOVING THE PICTURE TUBE

While keeping the front panel demounted (Condition of Fig. 7-7), detach the picture tube by removing the four screws (C) shown in Fig. 7-7.

Note: Exercise care in handling the picture tube.

When reinstalling the picture tube, confirm that its position is correctly aligned with the front panel position.

### ■ POSITIONING THE UNIT DURING REPAIR WORK

1. Measure voltage and waveform of the signal PB by positioning the unit in the condition shown in Fig. 7-6. When parts replacement is required, remove the two screws (C) shown in Fig. 7-6.
2. Measure voltage and waveform of the power/def. PB by positioning the unit in the condition shown in Fig. 7-8. When parts replacement is required, remove as necessary the connectors, wires, or clamps— including the deg. coil connector and the anode wire— and also withdraw the power/def. PB.

### ■ WIRE CLAMPING AND TYING BAND

1. Be sure to clamp the wire.
2. Never remove the tying band used for wire clamping. Should it be inadvertently removed, be sure to clamp the wire again, using insulating material.

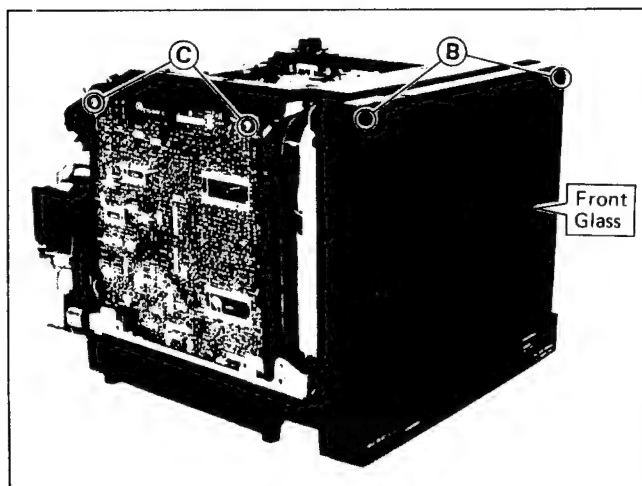


Fig. 7-6

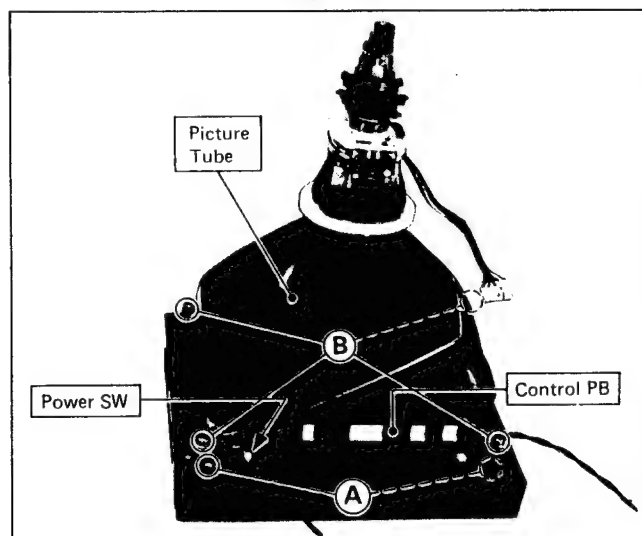


Fig. 7-7

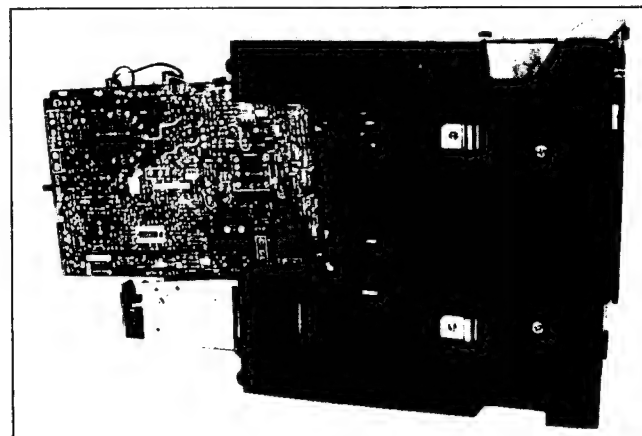


Fig. 7-8

# JVC

VICTOR COMPANY OF JAPAN, LIMITED  
TELEVISION RECEIVER DIVISION

1106 Iwai-city, Ibaraki-prefecture, 306-06, Japan



Printed in J.  
8303 Nissin

## ■ NOTICE

- Measurement of voltage values and waveforms was conducted by creating picture displays from color bar video signals of PAL, SECAM, and NTSC (3.58 MHz/4.43 MHz) respectively after setting the SYSTEM SWITCH at the AUTO position.

[Voltage value description method]

The described voltage values denote those obtained when pictures are created from PAL signals. However, at positions where the voltage values vary depending on input signal types (SECAM/NTSC), special marks [Example: (3.5 V)] are applied and descriptions are given outside the circuit diagrams.

Multimeter used

DC20k $\Omega$ /V

Given figures are all DC voltages.

Sweep speed of oscilloscope

H  $\rightarrow$  20 $\mu$ S/div.

V  $\rightarrow$  5mS/div.

Others  $\rightarrow$  sweep speed specified

- \* The figures of the signal circuits may be more or less different after adjustments, so use the figures simply for reference.

- Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

## ■ SCHEMATIC NOTES

UNLESS OTHERWISE SPECIFIED

Resistance : [ $\Omega$ ] (K $\rightarrow$ K $\Omega$ , M $\rightarrow$ M $\Omega$ ),  
1/4 or 1/6 [W] carbon resistor

Capacitance : 1 or higher  $\rightarrow$  [pF],  
less than 1  $\rightarrow$  [ $\mu$ F],  
working voltage  $\rightarrow$  50 [V],  
ceramic capacitor

Inductance : [ $\mu$ H]

ELECTROLYTIC : capacitance  
CAP. working voltage

BP  $\rightarrow$  bipolar  
polar)

Refer to the parts list in  
MANUAL about the details  
of parts.

⊙ symbols indicate test points

⬇ indicates chassis ground.

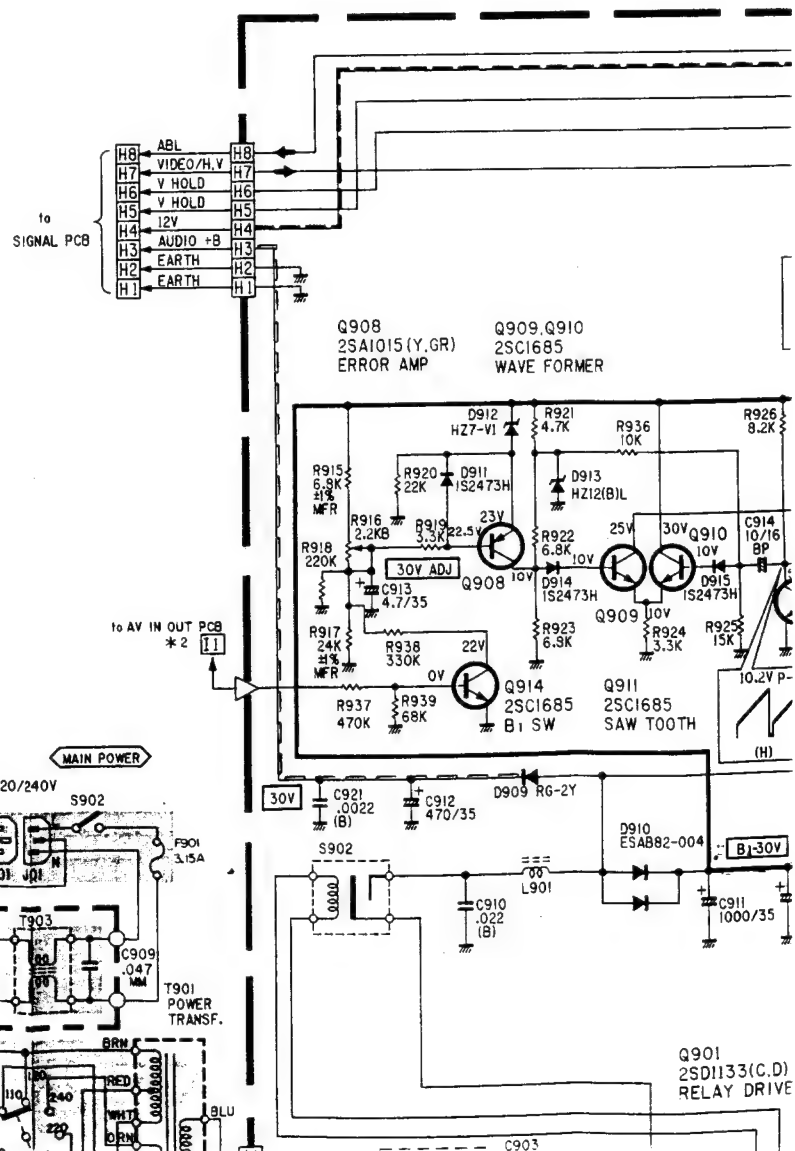
Hz indicates cycles per second

## ■ FOR SAFETY AND CONTINUED GOOD PERFORMANCE

- FR is an abbreviation of Fusible Resistor (Fusible Resistor), and operates as Fuse. Replacing Fuse, FR and shaded ( ) parts, be sure to use parts specified for safety purposes.
- For maximum reliability and performance, all other replacement parts should be identical to those specified.

## ■ PARTS LIST (SHADED PARTS IN THE SCHEMATIC DIAGRAM)

Symbol No.	Part No.	Part Name
<b>TRC-1241A (SIGNAL PCB ASS'Y)</b>		
FR1201	QRZ0054-2R7M	FR
1601	QRH124J-220H	"
<b>TRC-2241A (POWER/DEF. PCB ASS'Y)</b>		
R2530	QRD149J-1R0R	CR
2531	"	"
C2510	QFP42JJ-562M	PP Cap.
2511	" -472M	"
2512	" -562M	"
2513	" -562M	"
2526	QCY32HK-681M	C Cap.
2530	QFP42JJ-472M	PP Cap.
2531	" -562M	"
F02	QMF51A2-3R15S	Fuse
<b>TRC-3141B (CRT SOCKET PCB ASS'Y)</b>		
	CE40228-00A	CRT Socket
<b>TRC-8242A (H. CENTER PCB ASS'Y)</b>		
R8551	QRZ0054-220M	FR
8553	" -330M	"
<b>OUTSIDE OF PCBs</b>		
V01	250ATB22(E)	Picture Tube
DY01	CJ26001-00A	Def. Yoke
T502	CJ26055-00A	HV Transf.
T901	CE30077-A0A	Power Transf.
S902	QSE2135-002	Seesaw SW.
S903	CX40285-001	Voltage Selector



## ■ BASINGS OF TRANSISTORS AND ICs

ELECTROLYTIC : capacitance value [ $\mu\text{F}$ ] /  
CAP.

BP  $\rightarrow$  bi-polar (or non-  
polar) electrolytic cap.

Refer to the parts list in the SERVICE  
MANUAL about the detailed indications  
of parts.

⊙ symbols indicate test point connections.

⬇ indicates chassis ground.

Hz indicates cycles per second.



2SA562TM(Y)  
2SC458(C)  
2SC1627A(Y)  
2SA817A(Y)  
2SC1685  
2SA1015(Y,GR)



2SC454(C)  
2SC1213A(D,C)



2SD637(R,S)  
2SB642(R)



2SC2611

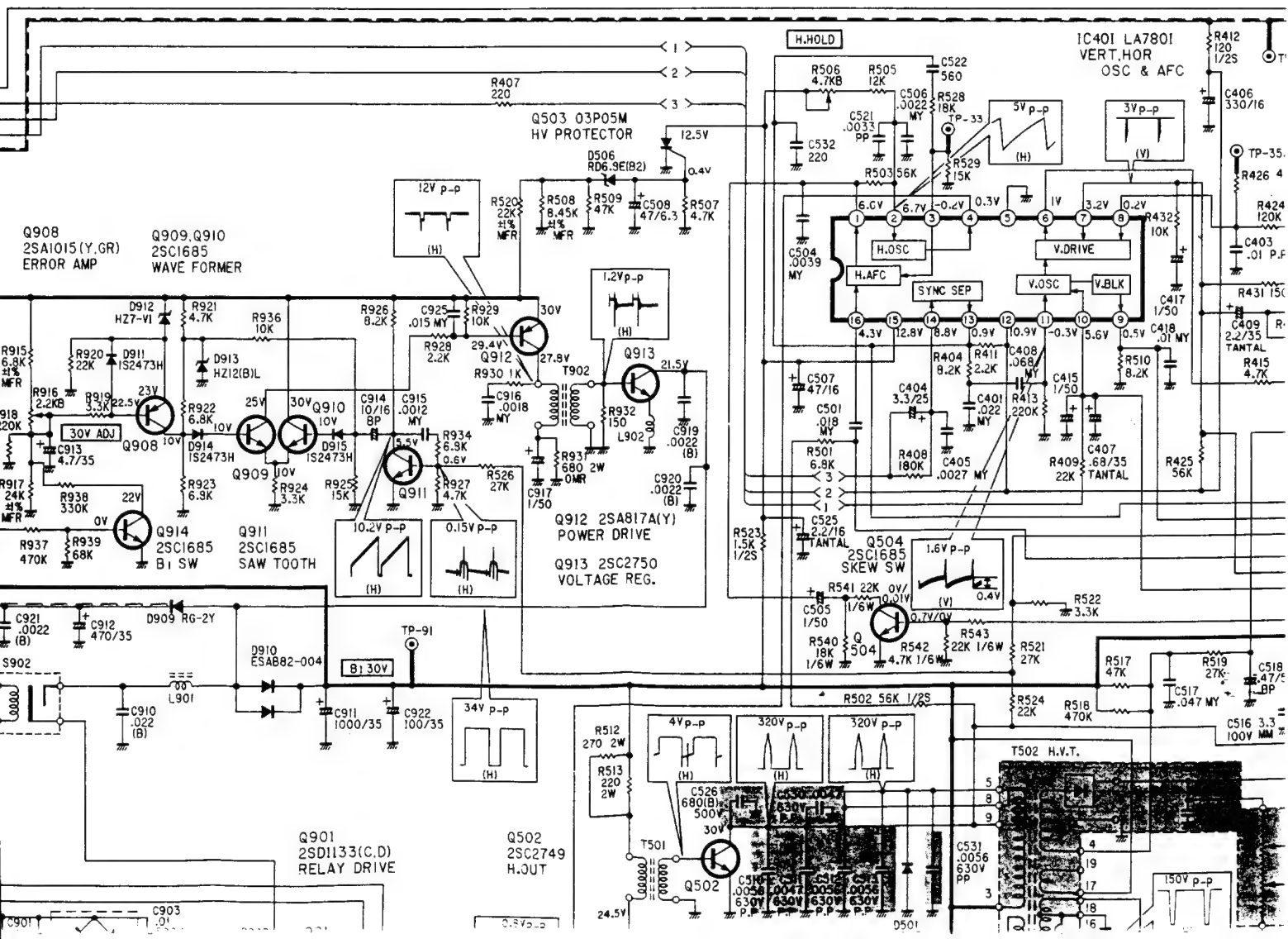
(16)

47V p-p (H)

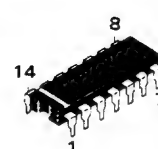
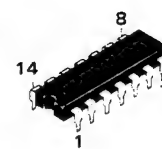


VERT FREQ SW PCB

System	Transistor	Q101	Q102	Q103	Q104	Q105
SW Position		C	B	C	B	C
PAL		8.5V	0.1V	8.7V	1.2V	0.7V
SECAM		8.5V	0.1V	8.7V	1.2V	0.7V
NTSC(3.58MHz)		4.8V	-0.3V	10.1V	0.5V	0.2V
NTSC(4.43MHz)		4.8V	-0.3V	10.2V	0.5V	0.2V



# TRANSISTORS AND ICs



2SC454(C)  
2SC1213A(D,C)

2SD637(R,S)  
2SB642(R)

2SC2611

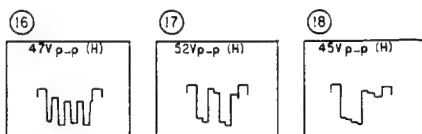
2SD1133(C,D)

2SC2749  
2SC2750

2SD1265(P)

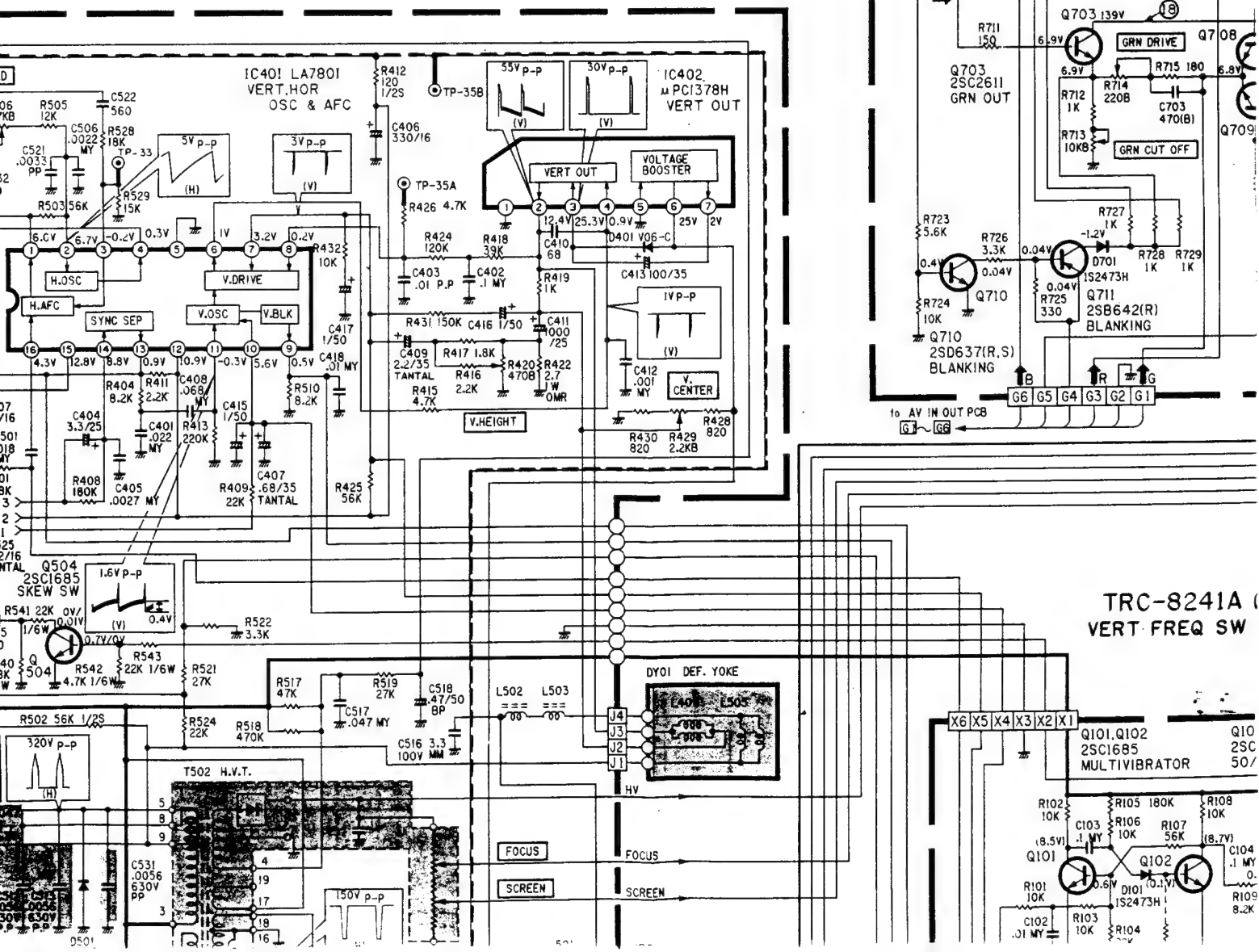
IC

IC



VERT FREQ SW PCB

System	Transistor	Q101	Q102	Q103	Q104	Q105	Q106	Q107	Q108
SW Position		C	B	C	B	C	B	C	B
PAL		8.5V	0.1V	8.7V	1.2V	0.7V	0.04V	0.31V	0.7V
SECAM		8.5V	0.1V	8.7V	1.2V	0.7V	0.04V	0.31V	0.7V
NTSC(3.58MHz)		4.8V	-0.7V	10.1V	0.5V	0.2V	9.3V	0.7V	0V
NTSC(4.43MHz)		4.8V	-0.3V	10.2V	0.5V	0.2V	9.3V	0.7V	0V







\* The figures of the signal circuits may be more or less different after adjustments, so use the figures simply for reference.

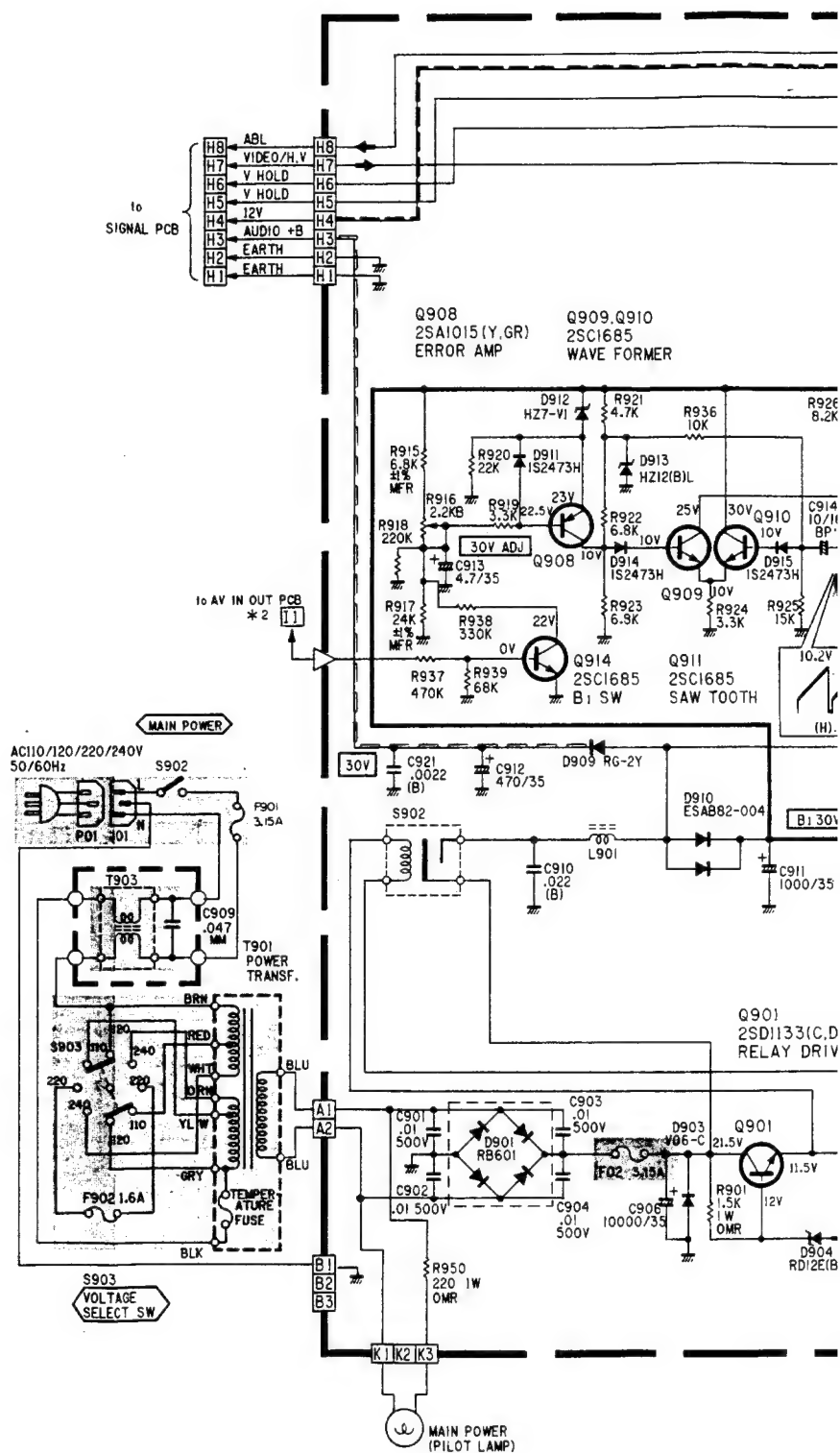
- Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

## ■ FOR SAFETY AND CONTINUED GOOD PERFORMANCE

- FR is an abbreviation of Fusible Resistor (  ), and operates as Fuse. Replacing Fuse, FR and shaded (  ) parts, be sure to use parts specified for safety purposes.
- For maximum reliability and performance, all other replacement parts should be identical to those specified.

## ■ PARTS LIST (SHADED PARTS IN THE SCHEMATIC DIAGRAM)

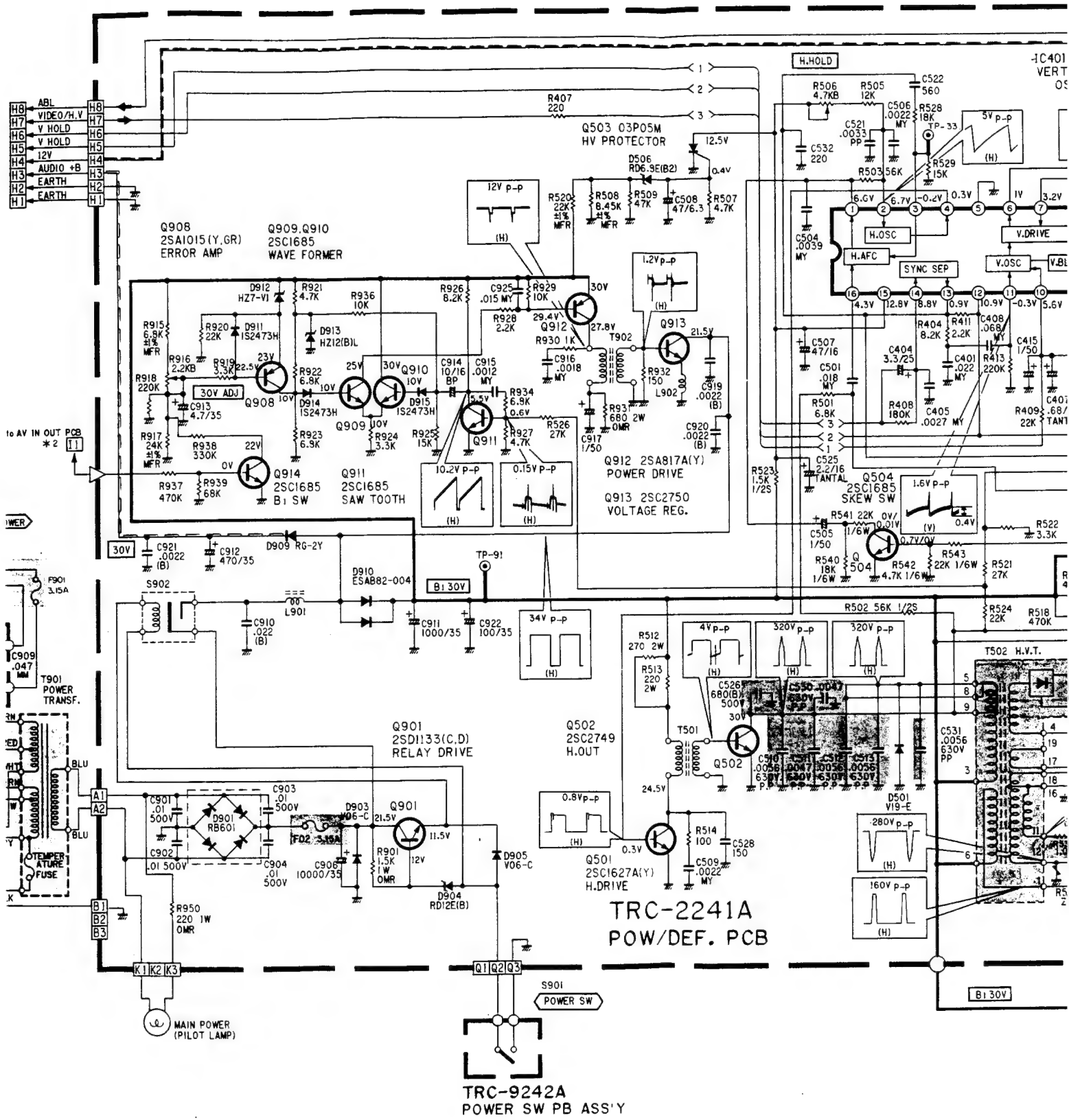
Symbol No.	Part No.	Part Name
<b>TRC-1241A (SIGNAL PCB ASS'Y)</b>		
FR1201 1601	QRZ0054-2R7M QRH124J-220H	FR "
<b>TRC-2241A (POWER/DEF. PCB ASS'Y)</b>		
R2530 2531	QRD149J-1R0R	CR "
C2510	QFP42JJ-562M	PP Cap.
2511	" -472M	"
2512	" -562M	"
2513	" -562M	"
2526	QCY32HK-681M	C Cap.
2530	QFP42JJ-472M	PP Cap.
2531	" -562M	"
F02	QMF51A2-3R15S	Fuse
<b>TRC-3141B (CRT SOCKET PCB ASS'Y)</b>		
	CE40228-00A	CRT Socket
<b>TRC-8242A (H. CENTER PCB ASS'Y)</b>		
R8551 8553	QRZ0054-220M " -330M	FR "
<b>OUTSIDE OF PCBs</b>		
V01	250ATB22(E)	Picture Tube
DY01	CJ26001-00A	Def. Yoke
T502	CJ26055-00A	HV Transf.
T901	CE30077-A0A	Power Transf.
S902	QSE2135-002	Seesaw SW.
S903	CEX40285-001	Voltage Selector
J01	QMC0335-003R	AC Socket
T903	CE40180-00A	Line Filter
C909	QFZ9017-473M	MM Cap.
F901	QMF51A2-3R15S	Fuse
F902	" -1R6S	"
	CEX40321-200	Power Cord



**JVC**

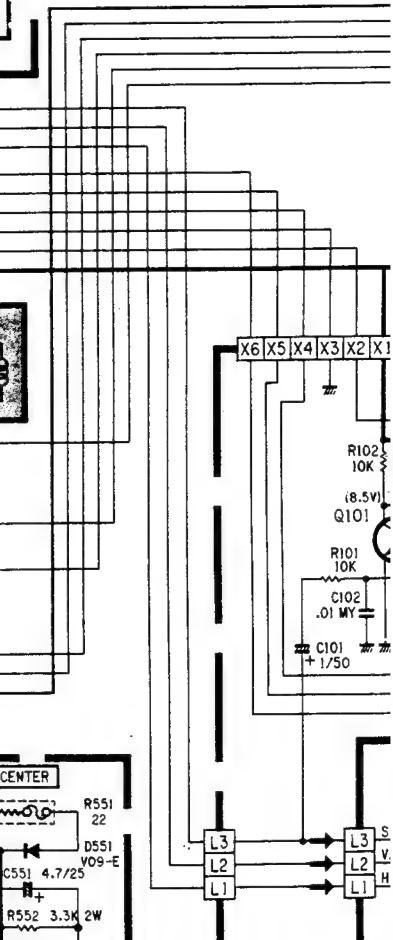
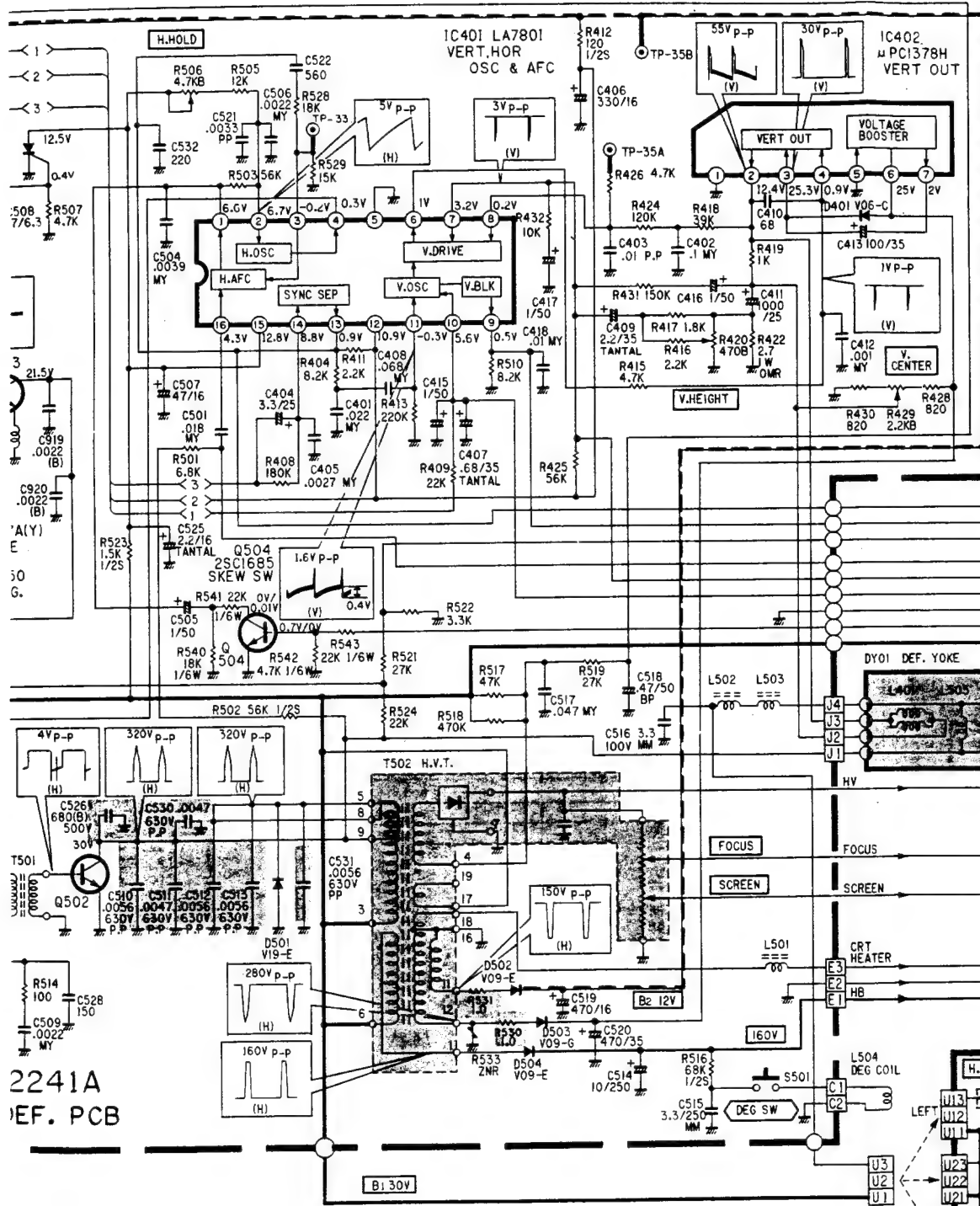
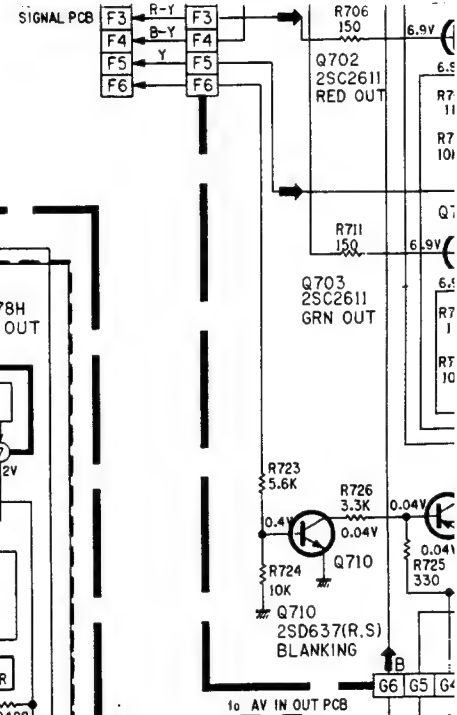
VICTOR COMPANY OF JAPAN, Ltd.





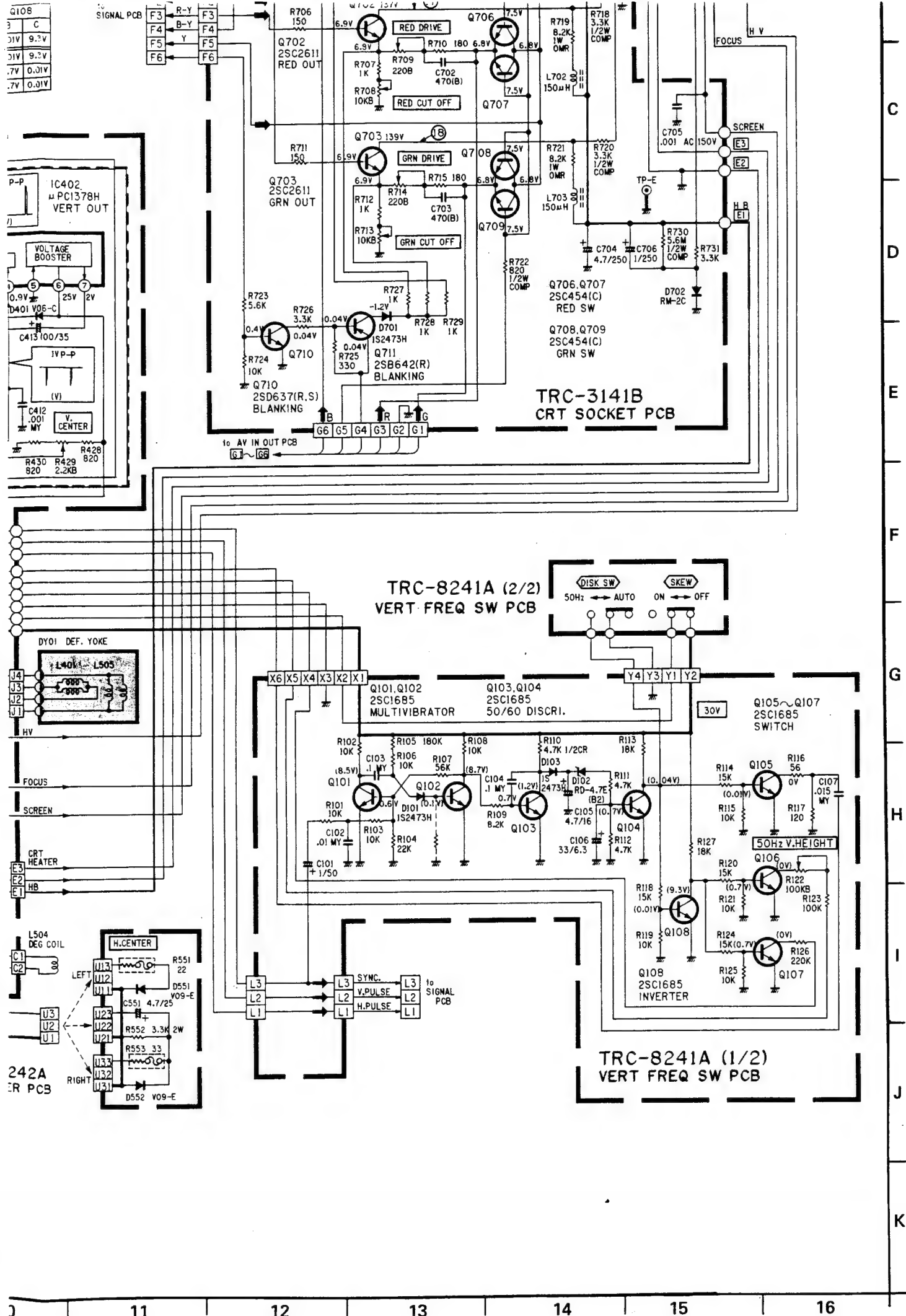


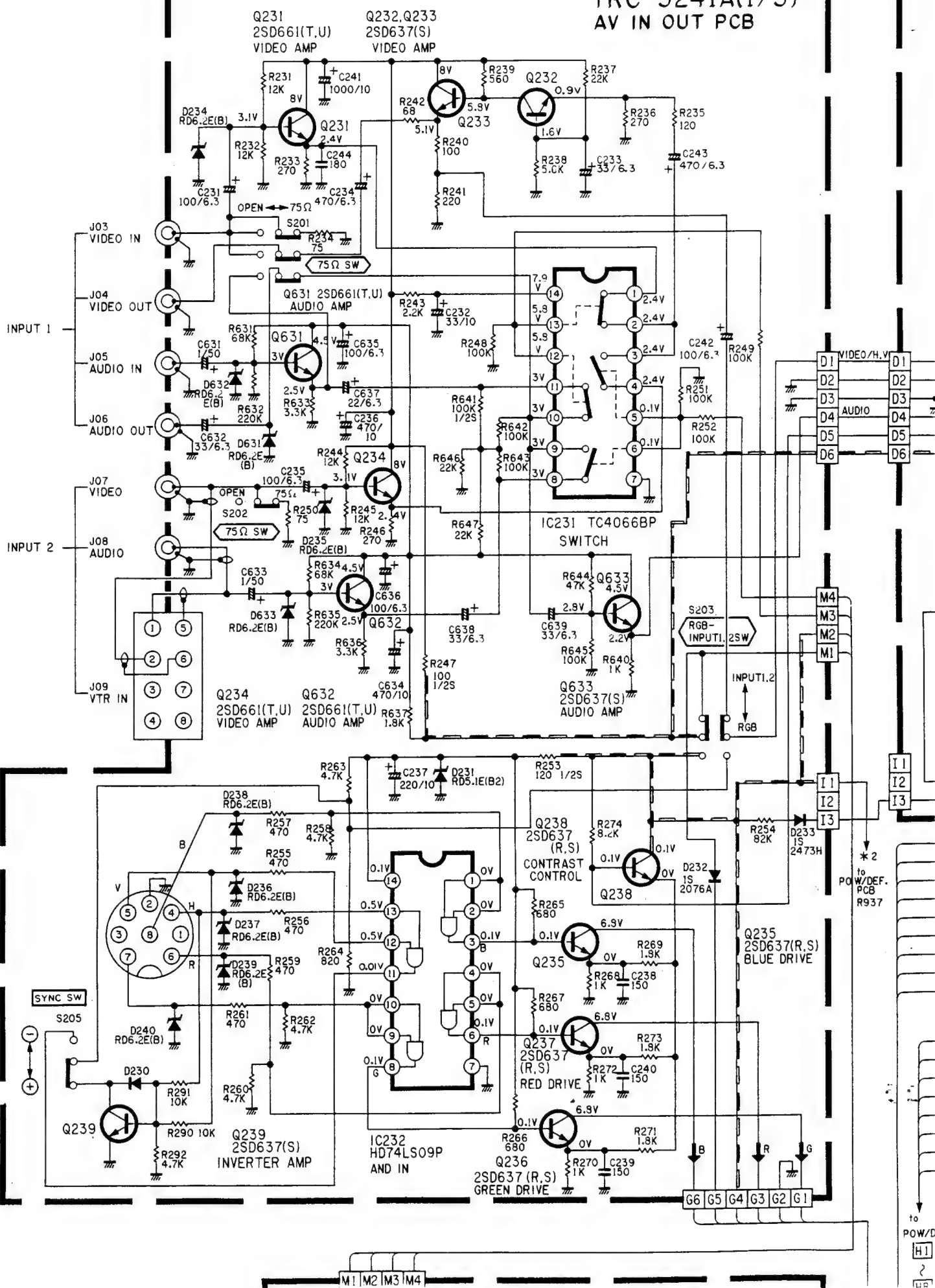
System	SW Position	C	B	C	B	C	B	C	B	C	B	C	B	C
PAL		8.5V	0.1V	8.7V	1.2V	0.7V	0.04V	0.01V	0.7V	0V	0.7V	0V	0.01V	9.3V
SECAM		8.5V	0.1V	8.7V	1.2V	0.7V	0.04V	0.01V	0.7V	0V	0.7V	0V	0.01V	9.3V
NTSC(3.58MHz)		4.8V	-0.3V	10.1V	0.5V	0.2V	9.3V	0.7V	0V	3.1V	0V	5.4V	0.7V	0.01V
NTSC(4.43MHz)		4.8V	-0.3V	10.2V	0.5V	0.2V	9.3V	0.7V	0V	3.1V	0V	5.4V	0.7V	0.01V



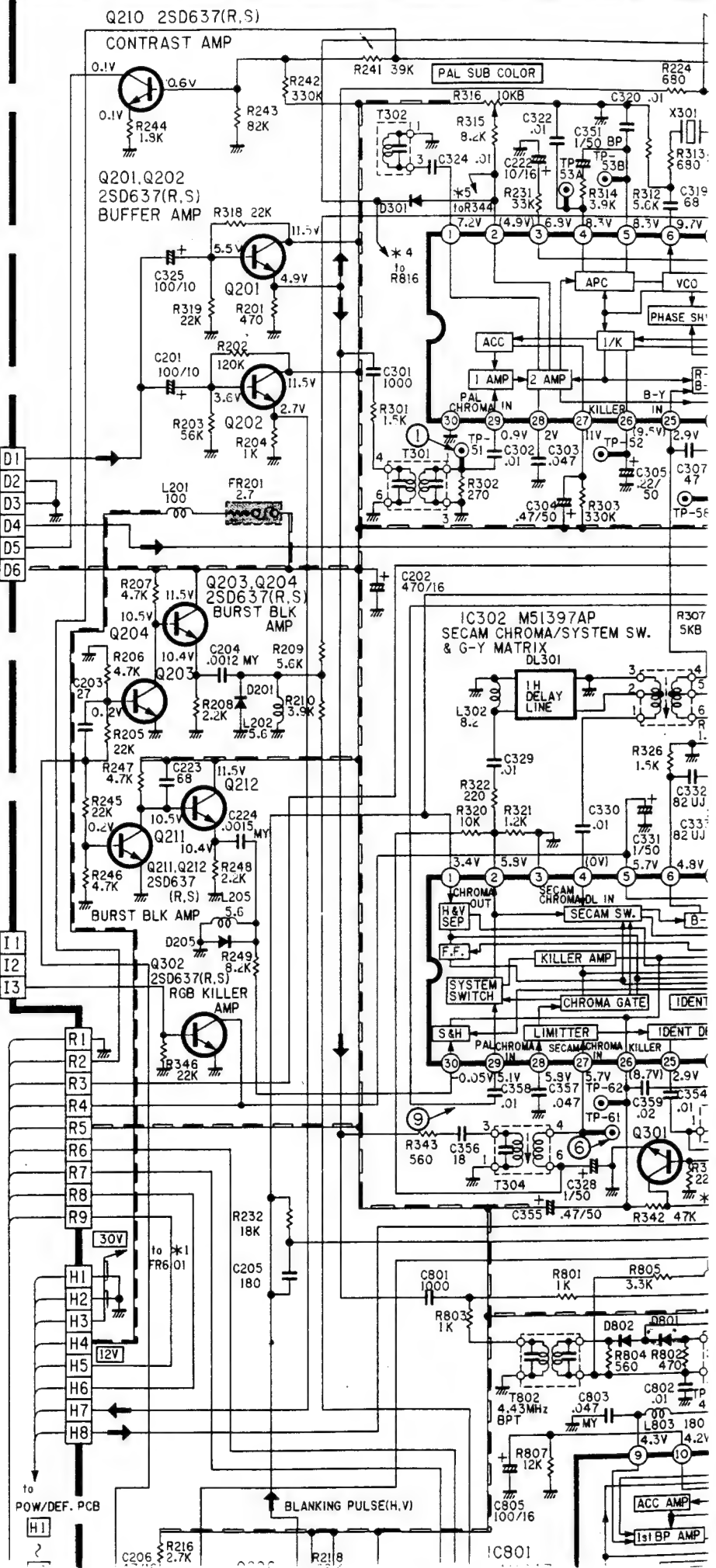
2241A  
DEF. PCB

TRC-8242A  
H CENTER PCB

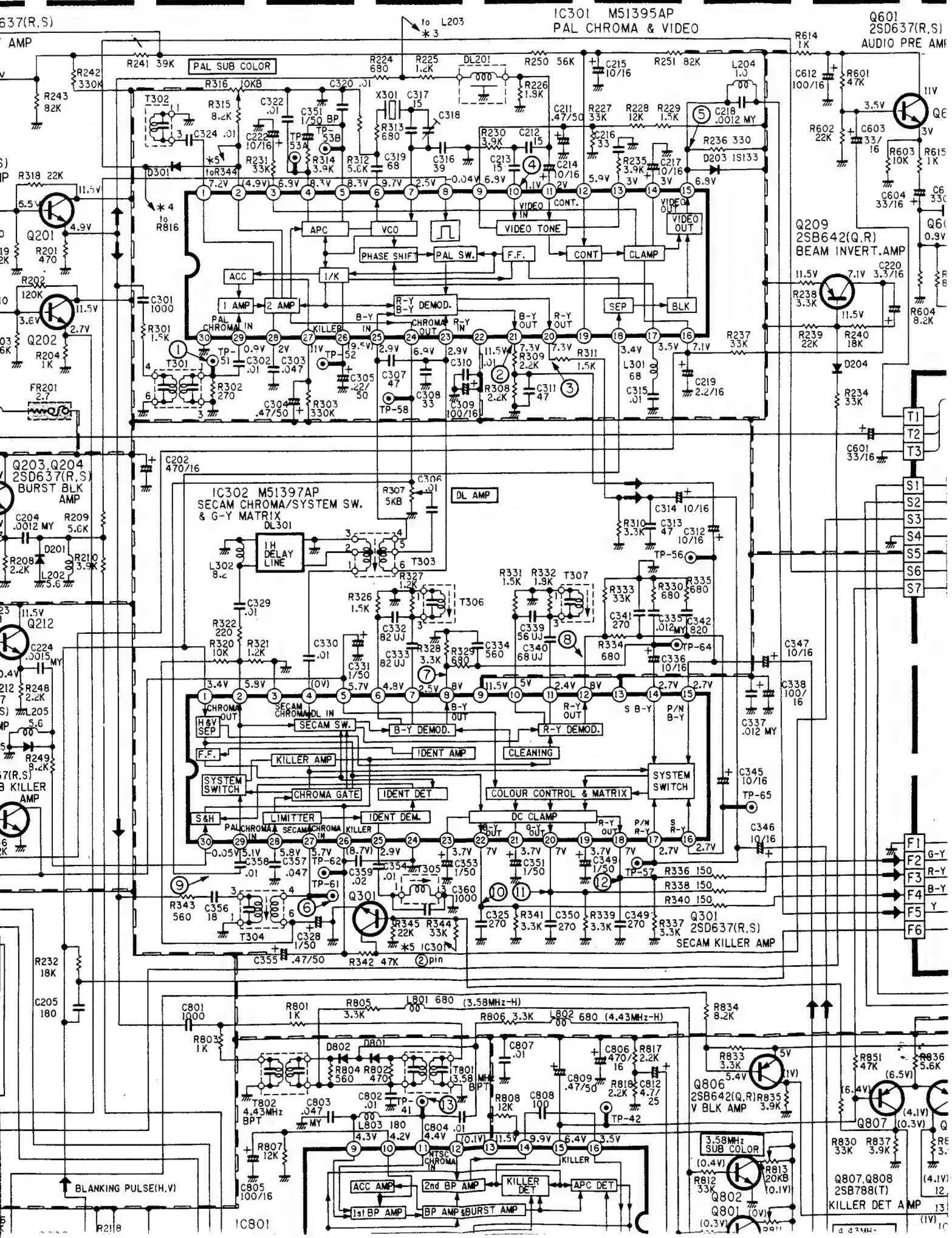




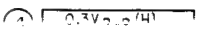
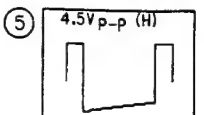
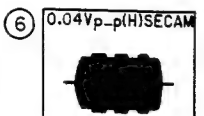
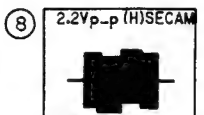
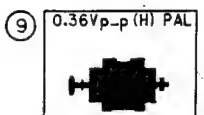
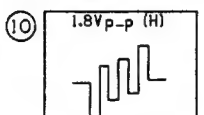
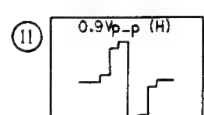
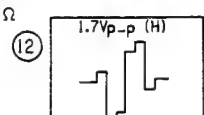
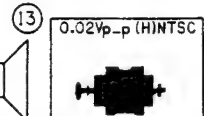
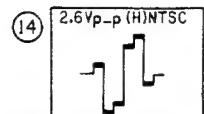
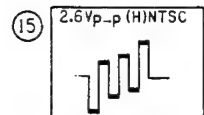
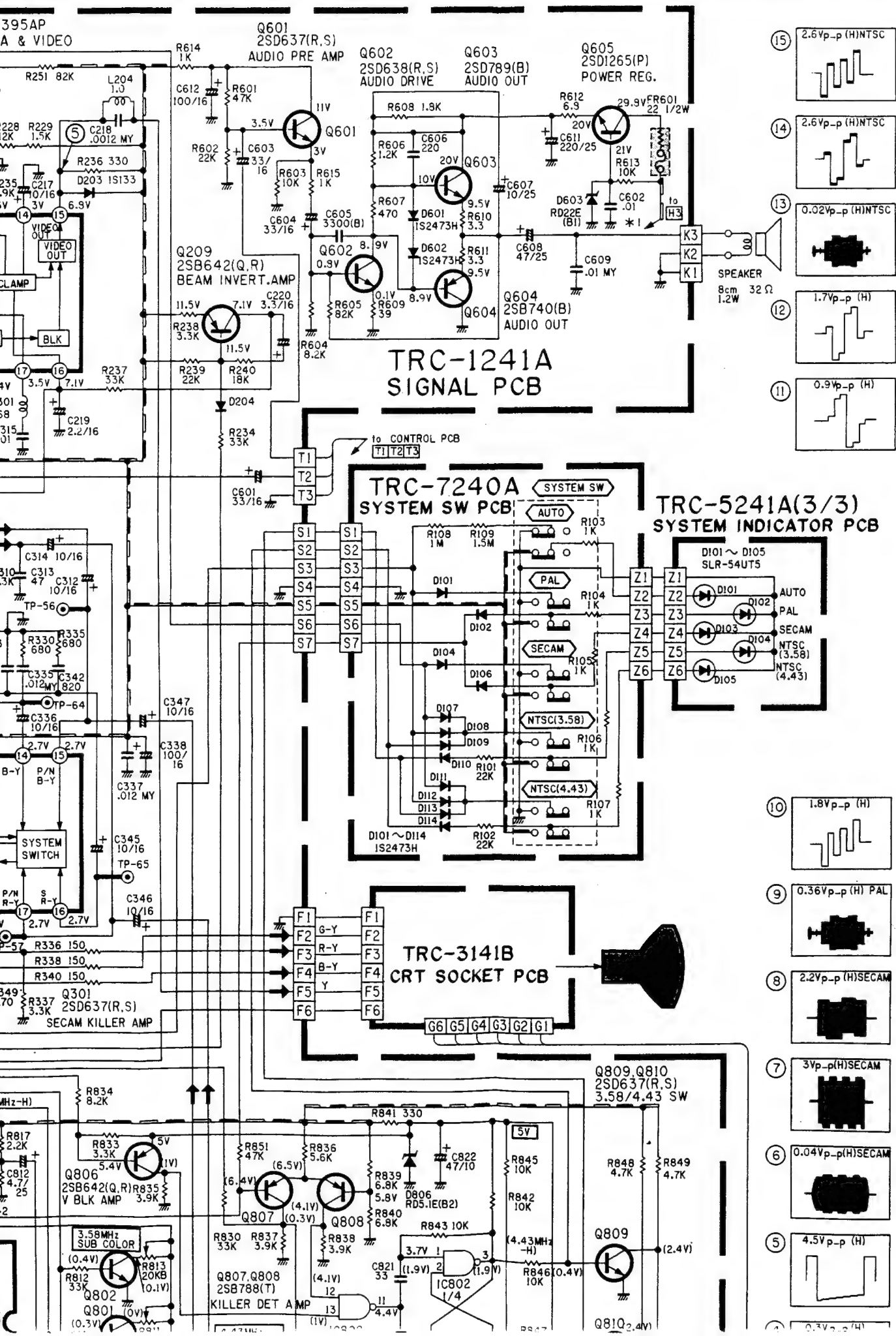
TRC-5241A(1/3)  
AV IN OUT PCB

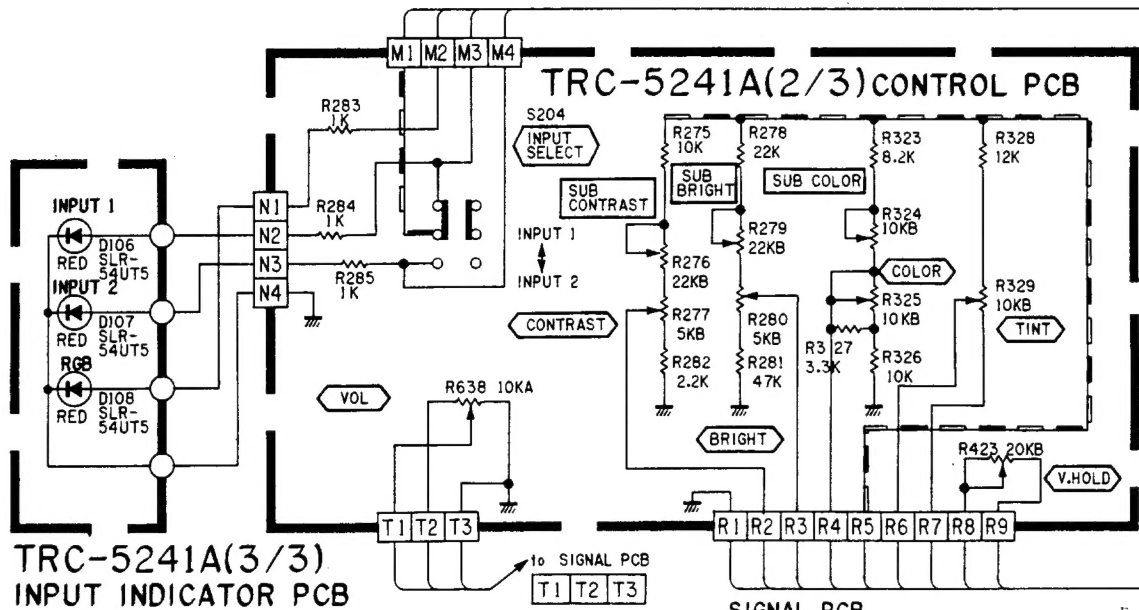
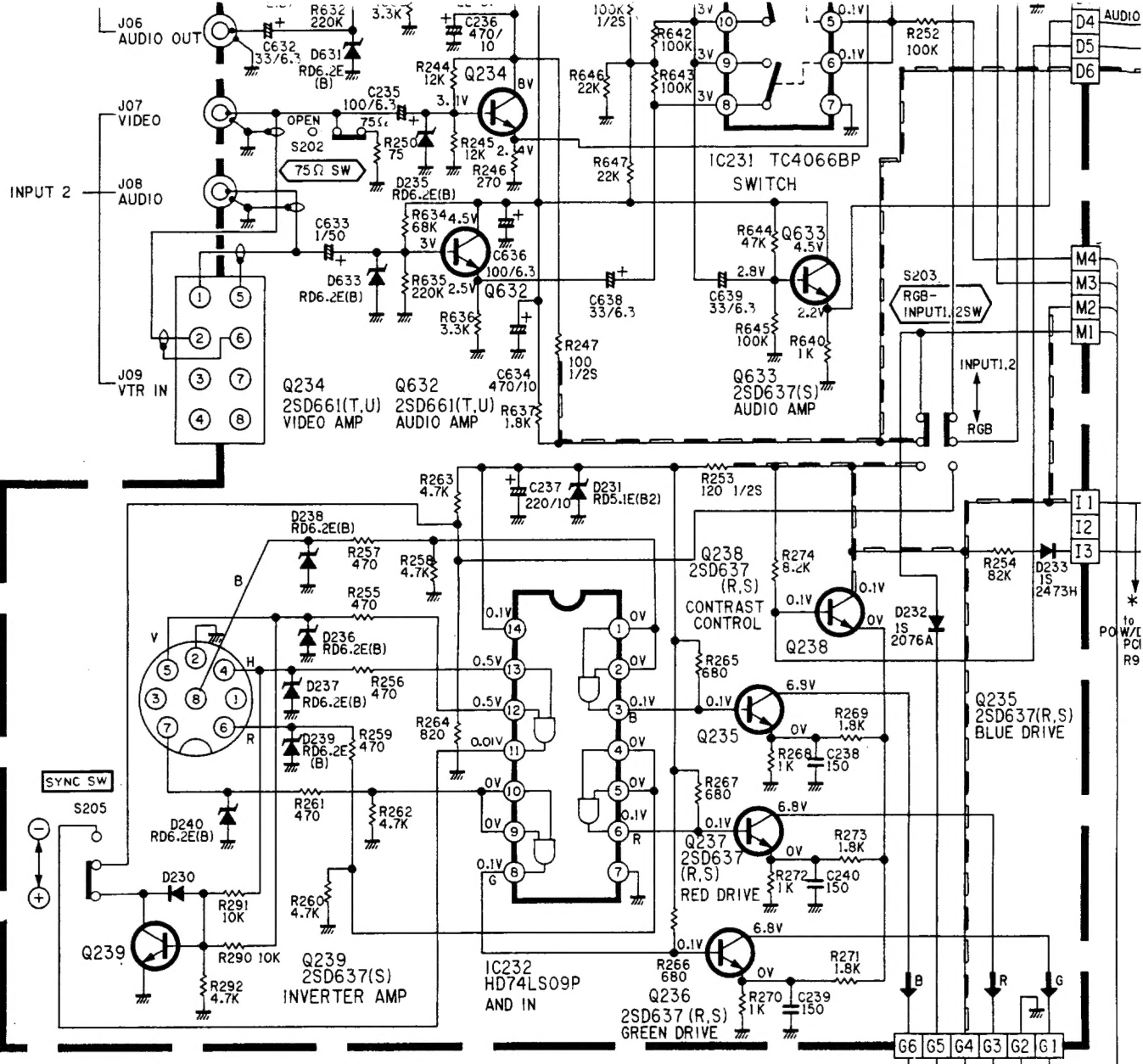


# MODEL TM-90PSN SCHEMATIC DIAGRAM



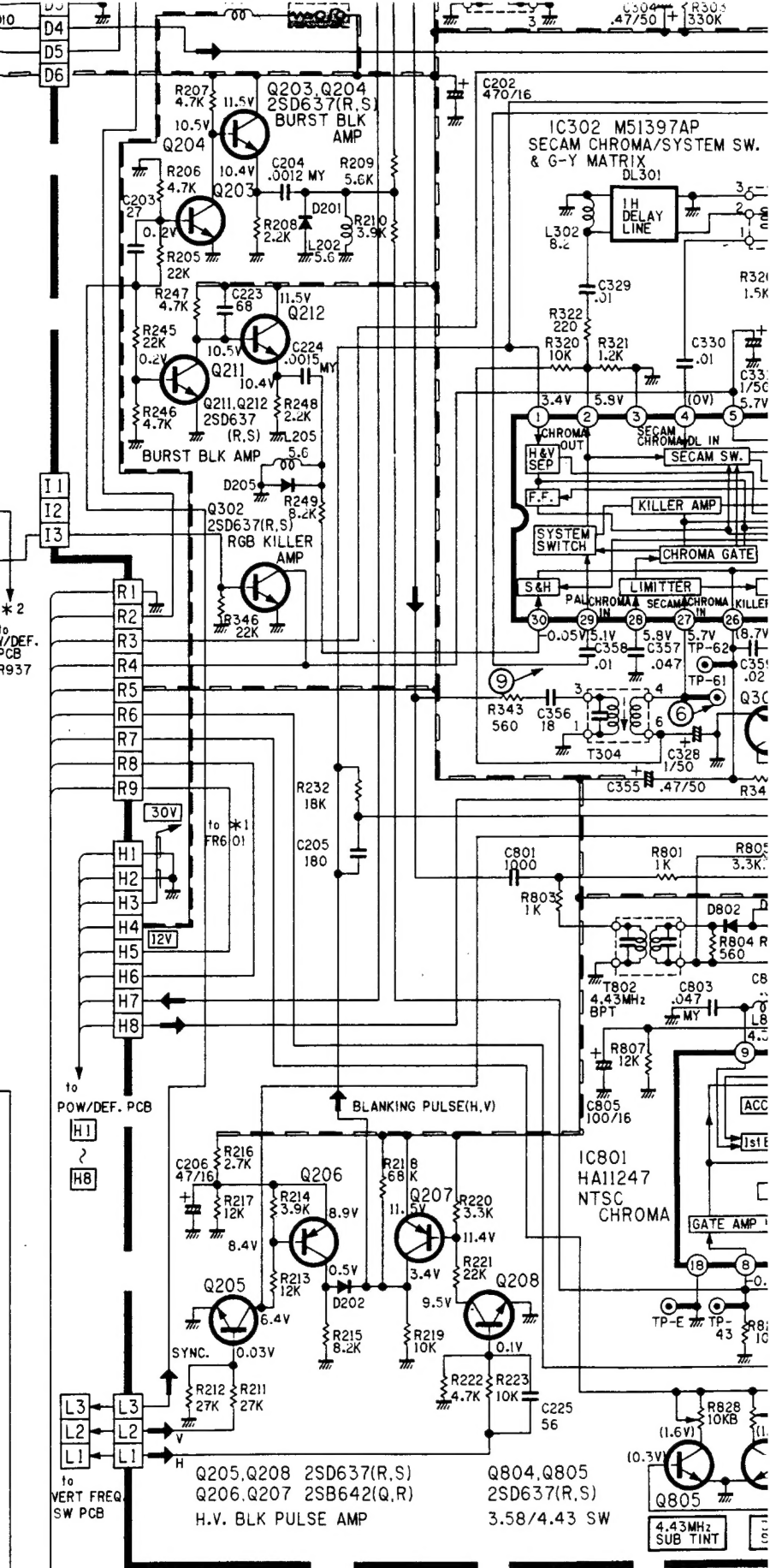
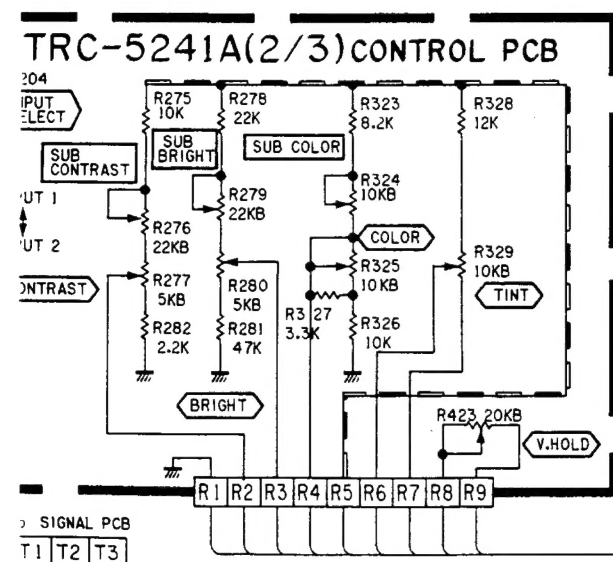
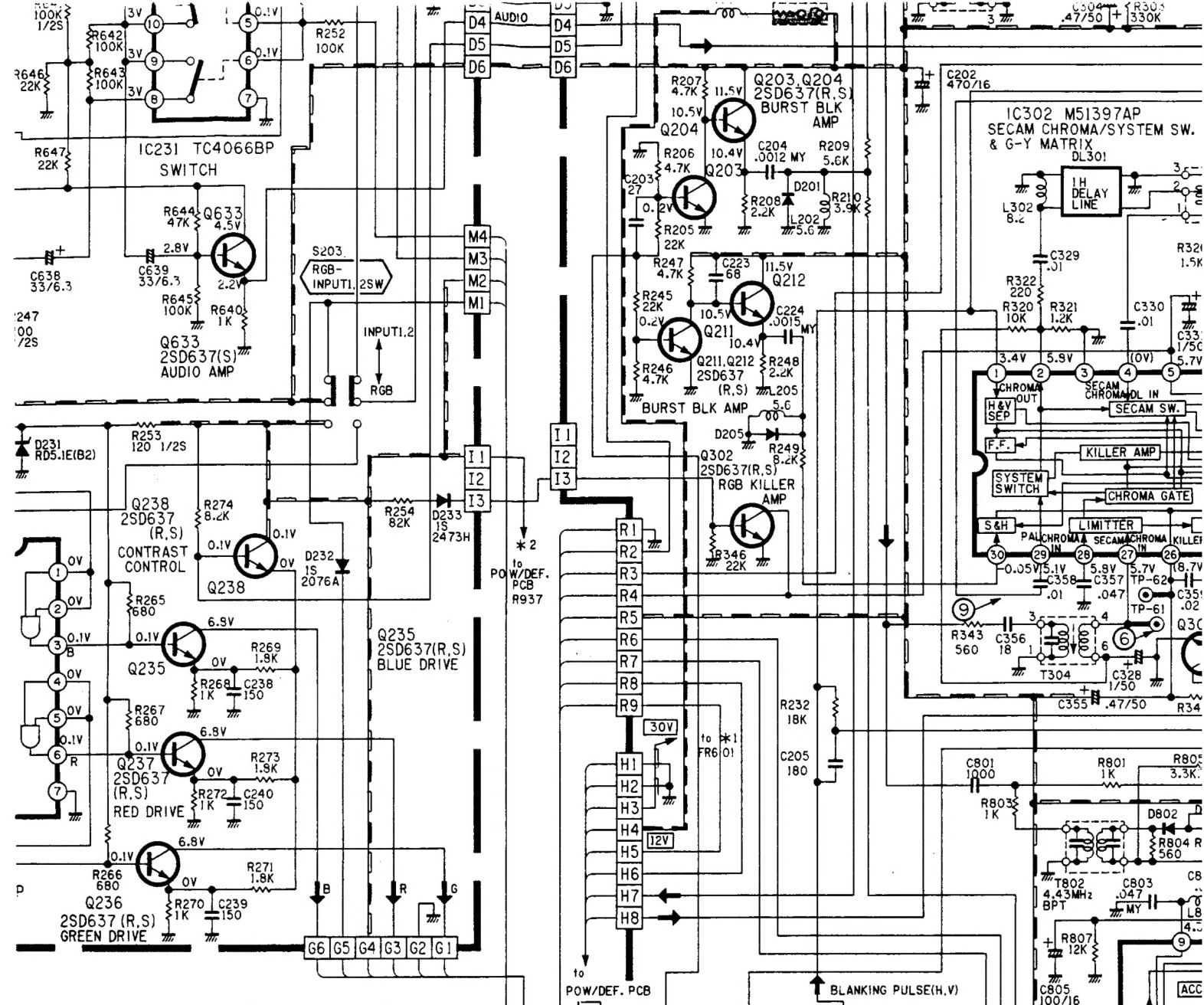






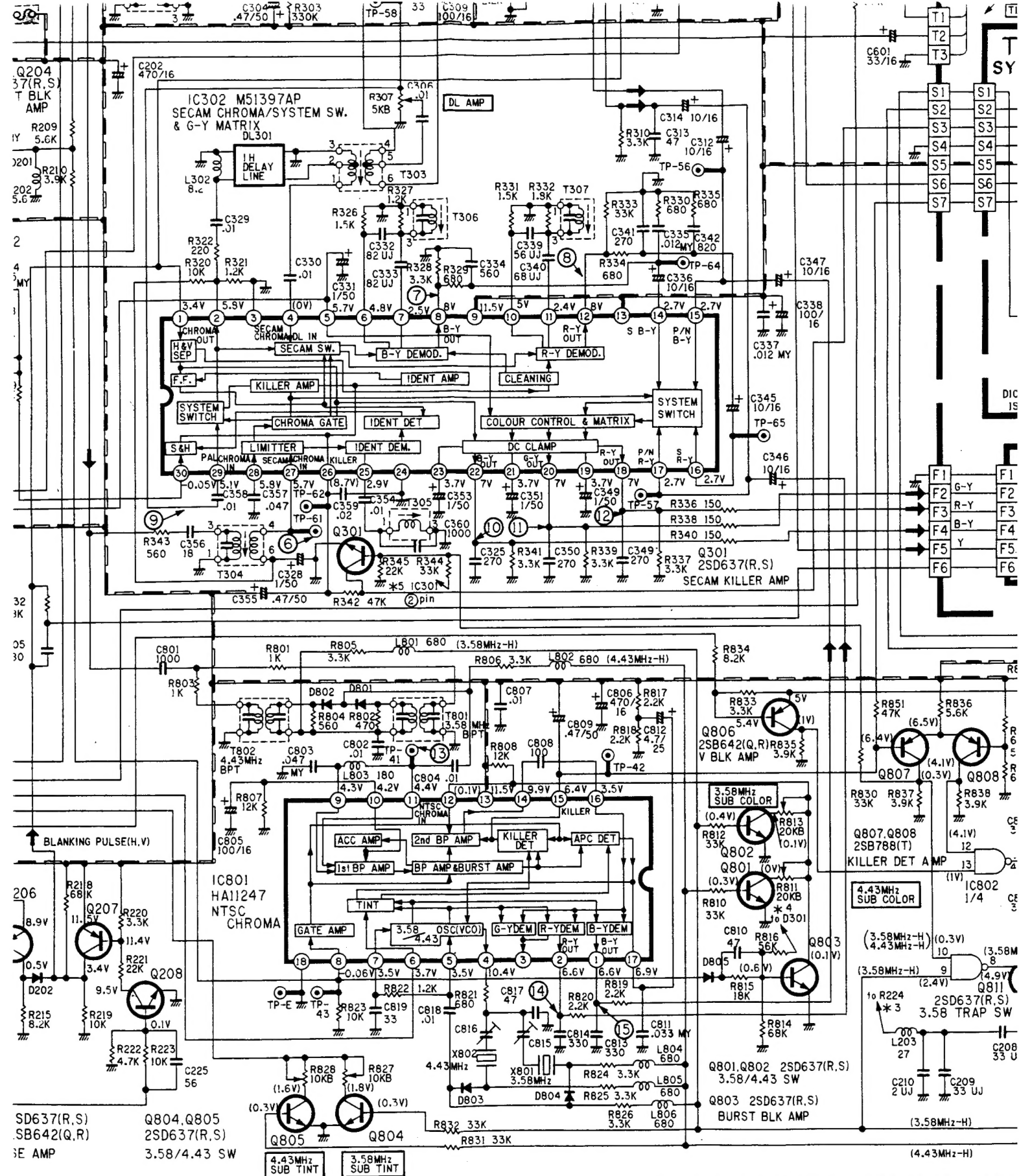
IC & IC pin No.	IC301	IC302	IC801
System	2	26	4
SW Position	2	26	12
PAL	4.9V	9.5V	0V
SECAM	0.1V	8.9V	2.8V
NTSC(3.58MHz)	0.1V	8.9V	9.3V
NTSC(4.43MHz)	0.1V	8.9V	8.6V





IC & IC pin No.		IC301		IC302		IC801		IC802								
System	SW Position	2	26	4	26	12	15	2	3	4	6	8	9	10	12	13
	PAL	4.9V	9.5V	0V	8.7V	0.1V	6.4V	1.9V	1.9V	1.9V	1.9V	4.9V	2.4V	0.3V	4.1V	1V
	SECAM	0.1V	8.9V	2.8V	9.3V	4.9V	7.2V	1.9V	1.9V	1.9V	1.9V	4.9V	2.4V	0.3V	4.1V	1V
	NTSC(3.58MHz)	0.1V	8.9V	0V	8.6V	4.9V	5.4V	3.7V	0.2V	0.2V	3.7V	0.2V	4.7V	4.5V	0.3V	0.6V
	NTSC(4.43MHz)	0.1V	8.9V	0V	8.6V	4.9V	5.4V	0.2V	3.7V	3.7V	0.2V	4.8V	0.04V	4.5V	0.3V	0.6V

System SW Position	Transistor		Q801		Q802	
	B	C	B	C	E	
PAL	0.3V	0V	0.3V	0.1V	0.	
SECAM	0.3V	2.5V	0.3V	2.3V	0.	
NTSC(3.58MHz)	0.03V	4.9V	0.6V	0.02V	0.	
NTSC(4.43MHz)	0.6V	0.02V	0.04V	4.9V	0.	



2	13
1V	1V
1V	1V
1.3V	0.6V
1.3V	0.6V

Transistor	Q801	Q802	Q803	Q804	Q805	Q806	Q807	Q808	Q809	Q810
System SW Position	B	C	B	C	B	C	B	C	B	C
PAL	0.3V	0V	0.3V	0.1V	0.6V	0.1V	0.3V	1.8V	0.3V	1.6V
SECAM	0.3V	2.5V	0.3V	2.3V	0.2V	4.9V	0.3V	1.6V	0.3V	1.9V
NTSC(3.58MHz)	0.03V	4.9V	0.6V	0.02V	0.2V	4.9V	0.6V	0.02V	0.03V	3.2V
NTSC(4.43MHz)	0.6V	0.02V	0.04V	4.9V	0.2V	4.9V	0.04V	3.6V	0.6V	0.01V

